MICROSTRATEGY INC
Form 10-K
February 10, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 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 000-24435

MICROSTRATEGY INCORPORATED

(Exact Name of Registrant as Specified in Its Charter)

Delaware	1850 Towers Crescent Plaza, Tysons Corner, VA	22182	51-0323571
(State of Incorporation)	(Address of Principal Executive Offices)	(Zip Code)	(I.R.S. Employer Identification No.)

Registrant's Telephone Number, Including Area Code: (703) 848-8600

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

Title of each class	Name of each exchange on which registered
Class A common stock, par value $0.001 per share	The NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: Not applicable

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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 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 definitions 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 smaller reporting company)	Smaller reporting company

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant (based on the last reported sale price of the registrant's class A common stock on June 30, 2016 on the NASDAQ Global Select Market) was approximately $1,648.0 million.

The number of shares of the registrant's class A common stock and class B common stock outstanding on January 30, 2017 was 9,400,110 and 2,035,184, respectively.

Documents incorporated by reference: Portions of the definitive proxy statement for the 2017 Annual Meeting of Stockholders of the Registrant to be filed subsequently with the SEC are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent indicated herein.

MICROSTRATEGY INCORPORATED

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The trademarks and registered trademarks of MicroStrategy Incorporated and its subsidiaries referred to herein include, but are not limited to, MicroStrategy, MicroStrategy 10, MicroStrategy Cloud, MicroStrategy Analytics, MicroStrategy Mobile, MicroStrategy Desktop, MicroStrategy Web, MicroStrategy Server, MicroStrategy Visual Insight, MicroStrategy Distribution Services, MicroStrategy Data Mining Services, MicroStrategy Enterprise Manager, MicroStrategy Services, MicroStrategy Professional Services, Usher, Usher Professional and Global Delivery Center. Third-party product and company names mentioned herein may be the trademarks of their respective owners.

CERTAIN DEFINITIONS

All references in this Annual Report on Form 10-K to "MicroStrategy," the "Company," "we," "us," and "our" refer to MicroStrategy Incorporated and its consolidated subsidiaries (unless the context otherwise indicates).

FORWARD-LOOKING INFORMATION

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). For this purpose, any statements contained herein that are not statements of historical fact, including without limitation, certain statements under "Item 1. Business," "Item 1A. Risk Factors," and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and located elsewhere herein regarding industry prospects and our results of operations or financial position, may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," and similar expressions are intended to identify forward-looking statements. The important factors discussed under "Item 1A. Risk Factors," among others, could cause actual results to differ materially from those indicated by forward-looking statements made herein and presented elsewhere by management from time to time. Such forward-looking statements represent management's current expectations and are inherently uncertain. Investors are warned that actual results may differ from management's expectations.

PART I

Item 1. Business
Overview

MicroStrategy® is a leading worldwide provider of enterprise software platforms. Our mission is to provide enterprise customers with a world-class software platform and expert services so they can deploy unique intelligence applications.

MicroStrategy 10™ consolidates analytics and mobility in a single unified platform, available both as on-premise software and as a hosted service offering in MicroStrategy Cloud™. Our enterprise platform combines traditional business intelligence functionality with data discovery, mobile analytics, and powerful identity intelligence generated by digital credentials. MicroStrategy 10 builds on proven enterprise capabilities to make sophisticated, high-performance analytics more accessible, easier to use, and faster. MicroStrategy 10 consists of MicroStrategy Analytics™, MicroStrategy Mobile™, and Usher™.

MicroStrategy Analytics empowers large organizations to analyze vast amounts of data and securely distribute actionable business insight throughout an enterprise, while also being able to cater to smaller workgroups and departmental use via MicroStrategy Desktop™. MicroStrategy Analytics delivers reports and dashboards, and enables users to conduct ad hoc analysis and share insights anywhere, anytime, via mobile devices (via MicroStrategy Mobile) or the Web (via MicroStrategy Web™). It also combines the agility and productivity of self-service visual data discovery with the security, scalability, and governance features of enterprise-grade business intelligence. MicroStrategy Analytics is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

MicroStrategy Web is the primary interface for analysts, data scientists, consumers and developers, offering interactive reporting, dashboarding, and ad-hoc data discovery capabilities through a Web browser. With MicroStrategy Web, a user can design and deliver dashboards across various styles of business intelligence, including scorecards, pixel-perfect documents and invoices, and interactive reports and statements, as well as for visual data discovery. MicroStrategy Web can also connect to a variety of data sources, and be used to build sophisticated advanced analytical models that may be inserted within dashboards and reports. MicroStrategy reports and dashboards can be personalized and automatically delivered to thousands of users with MicroStrategy Server™'s advanced distribution capabilities. Web applications can also be extensively customized and embedded into other applications using Web SDK for a branded experience.

MicroStrategy Desktop is a free, standalone, on-premise, single-user tool for fast, powerful, and easy-to-use self-service visual data discovery. It enables business users to analyze and gain valuable insight and understanding into their organizations' data by quickly creating stunning, useful visualizations and dashboards, without assistance from the IT department. MicroStrategy Desktop can be readily downloaded and installed on a PC or Mac, making the power of MicroStrategy 10 easily available. MicroStrategy Desktop can be used while offline and while not connected to MicroStrategy Server, and can connect to the MicroStrategy Server when needed.

MicroStrategy Mobile is fully integrated into the MicroStrategy Analytics platform, so it is easy to leverage existing visualizations, reports and dashboards to instantly deploy mobile business intelligence. In addition, MicroStrategy Mobile extends beyond analytics to enable organizations to rapidly build custom mobile applications that deliver analytics combined with transactions, multimedia, and mapping to support business workflows. The robust code-free application development platform is designed to reduce development costs and accelerate the deployment of native mobile business apps optimized for both iOS and Android™. Companies can build fully native iOS and Android apps that take advantage of the unique device and operating system capabilities (e.g., GPS/location, calendar, and camera) on those devices. MicroStrategy Mobile is an easy, fast, and cost-effective vehicle for mobilizing an organization's information systems, including its data warehouses, business intelligence, ERP, CRM, and Web applications that are currently accessible only on the desktop. With MicroStrategy Mobile, businesses can transform their entire workforce into a connected and more productive mobile workforce using information-driven mobile apps that are significantly more robust and secure than their Web-only counterparts. With mobile access to critical corporate data and systems that drive the business, employees can have a virtual office in their hands at all times. MicroStrategy Mobile is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

Usher is a digital credential and identity intelligence offering that provides a highly secure, convenient way for organizations to dematerialize traditional forms of identity verification (such as passwords, tokens, and physical badges) and replace them with a single mobile identity badge that is cryptographically linked to its owner's smartphone and dynamically linked to an enterprise's existing identity repositories. Usher can be used as a powerful enterprise productivity and workforce management resource because it is designed to enable managers to gain an almost real-time window into the location and activity of their distributed workforces, while providing powerful interactive features to manage or direct them. With the addition of Usher Professional™, administrators can track user activity on a nearly real-time map using access telemetry. They can also engage in two-way communications with users from the Usher application. Usher works on standard smartphones running on iOS or the Android platform, and boasts an Apple Watch® integration. Through the use of Bluetooth®, QR codes, biometrics, push notifications, time-limited PIN codes, and other authentication methods, Usher users can log into applications, VPNs, and workstations, unlock doors and other physical gateways, and validate each other's identities. By delivering strong, multi-factor authentication that can be extended to nearly every corporate system, Usher's digital credential solution addresses some of the biggest challenges facing corporations today, including authentication, identity and access management, and resource authorization, while applying industry leading business intelligence and analytics to an enterprise's infrastructure. Usher is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

MicroStrategy Cloud is a platform for organizations that want to harness the power of data through our enterprise solutions via the cloud. Compared to traditional on-premise approaches, MicroStrategy Cloud is architected to deliver best-of-breed MicroStrategy software via the cloud, with pre-configured, ready-to-go servers, coupled with the required supporting infrastructure with metadata databases, relational databases, and Big Data storage. With MicroStrategy Cloud, customers can launch enterprise analytics environments within minutes and use the full MicroStrategy 10 offering on a subscription basis.

MicroStrategy Analytics, offered via the on-premise enterprise platform, MicroStrategy Mobile, and MicroStrategy Cloud, together with related product and support services, continue to generate the vast majority of our revenue. During 2016, 2015, and 2014, we did not generate significant revenues from Usher.

We were incorporated as a Delaware corporation on November 17, 1989. Today, with operations in 27 countries worldwide, the Company is one of the largest independent publicly-traded analytics vendors as measured by annual revenue.

MicroStrategy 10

MicroStrategy 10 enables users to query and analyze detailed, transaction-level databases, large Hadoop® distributions, data warehouse appliances, departmental databases, cloud data sources, and user-owned data in spreadsheets. It transforms data into business insights through highly visual, interactive reports and dashboards that can be securely distributed to hundreds of thousands of users throughout an enterprise.

Five key business needs have driven demand for powerful analytics solutions:

- Increased consumption of analytics. In the past, dissemination of information was limited to a few power-users or analysts. Now, a wide range of information users – from customer service representatives to the CEO within a company, and from customers to suppliers outside the organization – can benefit from the insight that analytics provides. The wide acceptance of the Internet as an information source also has fueled demand for enterprise data to be accessible over the Web to tens of thousands of users across an enterprise. In addition, demand for analytics on mobile devices is being driven by the growth of the mobile Internet and by the accelerating proliferation of mobile devices.

• Increased data scalability. Increasing information generation, and in particular, the ability to capture and store electronically every business transaction and interaction, have made terabyte-size data warehouses commonplace. Due to very large data volumes at some organizations, such as data volumes

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generated by social media, data warehouses can now reach sizes in excess of tens of petabytes (1,000 terabytes). While transaction- and interaction-level information is now routinely captured, organizations often struggle to make productive use of such massive data stores. Organizations need to view data within its operational context – making even the most detailed information meaningful to business users. As a result, users want the ability to easily discover trends hidden in these very large databases and to verify these trends by reviewing the underlying detail.

- Improved analytics system performance. The increase in user population sizes and data volumes puts a strain on analytics infrastructures. Business users expect to retrieve the information they are requesting within seconds of making the request. Mobile devices have set this expectation even higher by increasing demand for near instantaneous responses to requests. Analytics administrators need to systematically monitor and tune the analytics environment to provide the expected service levels.
- Improved data comprehension and visualization. As data volumes have increased, the growing work demands placed on business users have meant progressively less time available to users to monitor and improve their businesses and make informed decisions. As a result, business users need to view the data in a summarized, easy-to-grasp format and navigate to areas of concern for additional insight. Presenting the data in a highly visual, accessible, and interactive format to collate, view, and explore information with agility and ease of use improves the overall comprehension of the business and speeds up the decision-making process.
- Increased demand for personalized, one-to-one customer and/or supplier experience. Many companies have implemented strategies that establish personalized relationships with each customer and/or supplier based on individual needs and preferences. They earn loyalty by providing superior service, security, and convenience. In order to successfully acquire, retain, and upgrade customers, these organizations need to understand their customers' profiles, transaction histories, past responses to marketing campaigns, and interactions with customer service. This information is often stored in widely dispersed and complex data sources, and obtaining a holistic view of the customer can be challenging.

The volume of data available to enterprises is growing at a very high rate, being driven by greater transaction detail, more sensors, more external data, and more data from mobile and social media platforms. MicroStrategy 10 helps organizations worldwide take advantage of this explosive growth in enterprise data by equipping managers and employees with timely, actionable information to make data-driven business decisions.

Solutions built on MicroStrategy 10 can give analysts, managers, and executives the critical insight they need to reduce costs, better allocate resources, improve efficiencies, and optimize operations. MicroStrategy 10 can also be used to build stronger relationships with business partners and suppliers by providing insights for managing inventory levels, analyzing supply chains, and tracking vendor performance. MicroStrategy 10 also includes predictive capabilities that enable organizations to leverage their historical data to project future business outcomes.

MicroStrategy 10 provides IT professionals with a powerful, highly automated mechanism for delivering insightful reports, visualizations, and dashboards to employees throughout an organization. In addition, MicroStrategy 10 includes a self-service feature, MicroStrategy Visual Insight™, which enables business users to upload, prepare, and explore enterprise data on their own, without any coding or IT expertise. With this feature, business users can spot trends and outliers in a completely visual and interactive way, thereby eliminating much of the need for IT to create reports and dashboards for them.

MicroStrategy 10 is available in two distinct end-user platforms: MicroStrategy Analytics and MicroStrategy Desktop. MicroStrategy Analytics is designed for enterprise-scale business intelligence, supporting high performance analytics on gigabytes, terabytes, or petabytes of data. Organizations can deploy MicroStrategy Analytics on-premise or access the same functionality within the MicroStrategy Cloud offering. MicroStrategy Desktop puts the power of MicroStrategy 10 into the hands of individual users for self-service visual analytics and data discovery. The two products share a common user experience — making it easy to start small with self-service analytics and grow into the production-grade features of MicroStrategy Analytics.

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MicroStrategy Analytics

MicroStrategy Analytics is our flagship analytics software. It is a comprehensive, enterprise-grade solution featuring sophisticated analytics, scalable performance, multi-level security, and rigorous data governance. It also combines the agility and productivity of self-service data visualization (also known as visual data discovery), which bridges the gap between fast, elegant, interactive visual analytics and powerful, large-scale enterprise business intelligence.

Key benefits of MicroStrategy Analytics include:

- Flexibility to report, analyze, and monitor. MicroStrategy Analytics unifies reporting, analysis, and real-time business monitoring into one seamless experience for the business user, one efficient and scalable architecture for the IT professional, and one economical and extensible utility for the CIO.
- Single platform for enterprise data discovery and analytics. MicroStrategy Analytics supports both business user and traditional IT user needs by offering various styles of BI bundled into a single comprehensive analytics platform. Business users have access to the data discovery toolset via MicroStrategy Web, MicroStrategy Desktop and MicroStrategy Mobile, and these user interfaces also allow them to consume other styles of analytics that their IT organizations have deployed, including pixel-perfect dashboards, enterprise reports and statements, scorecards, and more. Organizations do not need to resort to other point data discovery tools to gain access to agile data discovery capabilities, as they are available as an integrated part of MicroStrategy Analytics.
- Industrial-strength analytics. MicroStrategy Analytics enables industrial-strength analytics with enterprise-caliber technology and high user- and data-scalability. It enables centralized administration, operations, and maintenance in a unified interface and from within a unified hardware environment. Users can connect through their mobile devices, a zero-footprint Web offering, a Desktop-based client for offline analysis and by directly injecting analytics into Microsoft® Office products — expanding the reach of business intelligence across the enterprise.
- Data discovery at scale. MicroStrategy Analytics offers data discovery capabilities and is available to the end user across all standard user interfaces. With its HTML5 interface, users are able to connect to most data sources, ranging from personal spreadsheets to enterprise warehouses and cloud hosted sources, and can blend and prepare the data on their own without any IT support. This fully self-service work flow also allows the extension of the software to integrate with other third party capabilities. For instance, although MicroStrategy Analytics includes a variety of out-of-the-box visualizations, it also provides the ability to include other third-party visualizations like D3 and high charts, as well as the ability to include native and third-party advanced analytics into native workflows. The dashboards that include all of these components can also be personalized and shared with thousands of users across the organization using our powerful MicroStrategy Distribution Services™.
- Data to insight in minutes without IT involvement. MicroStrategy Analytics gives business users a simple, powerful, and fast way to analyze data with minimal set-up requirements. It is designed to allow business users to answer business questions on their own, avoiding the lengthy process of report specification and design. By using a variety of graphical visualizations to represent the entire analysis, users can easily and rapidly spot trends and outliers in large data sets, creating a user experience that seems to unfold in real time. In addition to this, MicroStrategy Analytics also supports traditional centralized BI through its metadata based architecture, from which MicroStrategy Analytics gains its ability to design highly reusable objects that deliver both high performance and scale. The combination of enterprise scalability along with data discovery features brings the power of enterprise analytics to the personal level, making it easy to extend the power of the entire MicroStrategy Analytics platform to everyone in the organization.
- Actionable insight. MicroStrategy Analytics helps organizations accelerate the speed and productivity of their businesses by building mobile apps and Web dashboards that connect to back-end transactional systems and databases to include data entry and action-taking features, including: submitting orders, one-click approvals and denials, notes for tracking and directing business activity, and write-back to data sources.

- Governed data discovery. MicroStrategy Analytics enables organizations to achieve data consistency and governance across every report, dashboard, visualization, and user within the system through a trusted and centralized metadata store. By leveraging our reusable metadata to define, manage, and maintain common definitions for metrics, attributes, data sets, and other objects through governed data discovery, organizations can lower the overall cost of developing new analytical outputs (such as reports or dashboards), while helping to ensure that the information delivered in those outputs is accurate, governed, and timely. MicroStrategy Analytics not only provides governance via centralized IT deployments where the dashboards and applications are based around a centralized metadata store, but also offers the ability to promote Desktop-based dashboards created by business users to the MicroStrategy Server, and to map external data assets to certified data systems.
- Heterogeneous access, joining and preparation of data from across the enterprise. MicroStrategy Analytics enables organizations to create integrated views of data across heterogeneous data stores. By mapping conforming dimensions from multiple sources within the MicroStrategy object model, the platform automatically joins data from multiple sources in the same table, chart, or visualization. Additionally, MicroStrategy Analytics also offers self-service data connect options to business users, who do not need to rely on data modeling or architecting to access any data source. Data can come from any source including most relational and columnar data warehouses, data marts, Apache™ Hadoop, SAP® Business Information Warehouse (SAP BW), Microsoft SQL Server® Analysis Services, IBM® Cognos® TM1®, Oracle® Essbase, Salesforce®, social media sources such as Twitter and Facebook, and many other operational system databases. In addition to allowing users to connect to these data sources, MicroStrategy Analytics offers data preparation and wrangling capabilities that allow business users to transform their data for improved analysis.
- Integration of advanced analytics into mainstream reporting and analyses. MicroStrategy Analytics' analytic engine includes predictive capabilities in MicroStrategy reports and analyses. The analytic engine can train and calculate many of the primary data mining functions, including time-series, association rules, clustering, regression, and decision-tree algorithms. Hand-in-hand with this calculation capability, MicroStrategy Analytics also includes the ability to import data mining models directly from data mining products from vendors like IBM SPSS®, Teradata®, and SAS® using the predictive modeling mark-up language (PMML) standard, and by embedding R statistical packages in the platform. With this capability, data mining models, such as neural network algorithms, rule set algorithms, and support vector machines, as well as ensembles of models, can be imported through a single click and automatically converted into a standard MicroStrategy metric. After that, the MicroStrategy Data Mining Services™ extension enables these metrics to be used freely and calculated quickly in reports, analyses, and alerts. A key capability of MicroStrategy Analytics is that business users can now readily tap into over 350 advanced analytics and statistical functions for data discovery purposes, and these functions are included within an easily accessible library.
- Support for large data volumes and all major relational database/hardware combinations. MicroStrategy Analytics supports systems with very large data volumes and is specifically optimized to support all major relational database platforms, Hadoop distributions, and data appliances commonly used for business intelligence systems, as well as multi-dimensional databases, such as SAP BW. Important features of our solution in this area include:
  - Native connectors to HDFS, in addition to the hive options to connect to Cloudera®, Hortonworks®, and MapR®, among other Big Data sources;
  - Available with MicroStrategy 10, and included as an integrated part of the MicroStrategy Server product are highly scalable, in-memory cubes that can now be partitioned and support parallel processing. This new advancement in in-memory architecture allows organizations to store a greater volume of data in memory and offers faster processing;
  - Dynamically generated SQL, multidimensional expressions (MDX), and Hadoop queries that optimize the performance of each major database;
  - Very Large Database (VLDB) parameters that allow individual reports to be tuned for performance;

- o Support for hand-written SQL, Hadoop, and XQuery queries;
- o Ability to support very large user populations; and
- o Highly reliable up-time, even in high volume applications.
- Powerful distribution engine for information delivery. Our technology offers a high performance, personalized distribution engine for delivering periodic and alert-based information to users via e-mail, Web, and mobile devices. The distribution engine is able to deliver dashboard applications in a highly automated and personalized manner to all major device types used in both domestic and international markets, enabling the delivery of information to users when and where it is needed.
- Customizable applications and Embedded BI. MicroStrategy Analytics applications can be customized extensively using proprietary SDK capabilities. This allows organizations to brand Web and mobile-based applications, and embed these applications directly into other corporate applications. White labeling for portal integration, single sign-on, and direct integration into other software increase the deployment options of MicroStrategy Analytics and allow IT groups to roll out analytics to the entire organization in a customizable manner, while still being able to leverage investments made in other technologies.

MicroStrategy's Metadata Architecture

The core differentiator of our products stems from their metadata-based centralized architecture, which has been built and refined over many years and provides access to enterprise data using familiar business terms, rules, and logic. The portable, flexible, reusable, object-oriented and dynamic nature of the metadata provides an efficient BI application and mobile app development platform while maximizing maintainability and enforcing enterprise-wide consistency. The dynamic behavior of metadata in our products helps ensure consistency across business definitions, and minimizes the number of objects created, stored, and managed. Other BI technologies are limited in their reuse capabilities, forcing developers to create the same components over and over again for use in each individual report.

MicroStrategy Server

MicroStrategy Server is the architectural foundation of MicroStrategy 10. It provides the core analytical processing and job management for all reporting, analysis, and monitoring applications. It provides a powerful, comprehensive set of features necessary for a scalable, fault-tolerant, enterprise-wide business intelligence system.

As the central contact point to metadata, MicroStrategy Server dynamically assembles the metadata objects to create optimized, multi-pass SQL queries for every major relational database, HiveQL queries for Hadoop distributions like Cloudera, MapR, Hortonworks, and Amazon EMR, interactive queries for real-time distributed SQL processing, optimized connectivity for NoSQL sources like Apache Cassandra™, HBase™, and MongoDB®, native connectivity to HDFS via MicroStrategy Hadoop Gateway, and MDX queries for multidimensional data sources. MicroStrategy Server retrieves the data, performs any additional analytical calculations not available in the databases, formats the report, and delivers the reports to business users via the MicroStrategy Web, Mobile, Office, or Desktop interfaces.

MicroStrategy Server is a highly scalable, parallel-processing, self-tuning analytic server. It manages high performance interactions involving terabytes of data accessed by tens of thousands of users using in-memory intelligent cubes, caching, load balancing, resource prioritization, and connection pooling. It accesses and joins data from multiple data sources, such as data warehouses, operational databases, multidimensional (cube) databases, and even Web services and flat files. MicroStrategy Server also manages users, system security, data security, and user functionality access. A clustering option is available with MicroStrategy Server that increases scalability, and provides fault tolerance with automatic failover.

MicroStrategy Web

MicroStrategy Web is great for business users or consumers looking to interact with data, or to even simply view a static overview report. At the same time, MicroStrategy Web is where savvy analysts put all of the pieces together to design highly formatted and customized dashboards.

MicroStrategy Web is the primary reporting interface for analysts, offering interactive reporting, dashboarding, and analysis through a Web browser. It provides enterprise analytical functionality with access to extensive report and document creation, manipulation, and formatting capabilities in an easy-to-use Web interface.

MicroStrategy Web architecture provides a single, consistent interface to users whether the BI application is departmental and internal, or an extranet application deployed to hundreds of thousands of users. MicroStrategy Web allows business users of any skill level to move fluidly between various styles of BI to satisfy their reporting, analysis, and monitoring needs.

MicroStrategy Desktop

MicroStrategy Desktop is a free, standalone, on-premise, single-user tool for fast, powerful, and easy-to-use self-service visual data discovery. It enables business users to analyze and gain valuable insight and understanding into their organizations' data by quickly creating stunning, useful visualizations and dashboards, without assistance from the IT department. MicroStrategy Desktop can be readily downloaded and installed on a PC or Mac, making the power of MicroStrategy 10 easily available. MicroStrategy Desktop can be used while offline and while not connected to MicroStrategy Server, and can connect to the MicroStrategy Server when needed. This user interface can help introduce MicroStrategy 10 to smaller departments that are looking for quick and easy deployment options. It offers easy migration options to the Enterprise edition of MicroStrategy Analytics, and all analytical content developed with MicroStrategy Desktop may be promoted to the MicroStrategy Server and can be consumed by the other user interfaces offered with MicroStrategy, such as MicroStrategy Web and MicroStrategy Mobile.

MicroStrategy Analytics Releases in 2016

MicroStrategy Analytics currently includes the following significant functional enhancements made during 2016:

- Reusable document themes and dataset replacement. Developers and analysts can repurpose document design across horizontals and verticals and reduce design time.
- Annotate and share on MicroStrategy Desktop. Highlight data points and add comments to enhance user experience with better collaboration and sharing. Previously available with MicroStrategy Mobile, this feature is now available with MicroStrategy Desktop as well.
- Customizable home screen. Design custom home pages with enhanced branding and menu bars with personalized folder structures.
- Express install. Allows administrators to install the enterprise platform faster by auto-configuring the prerequisites.
    - Combine multiple dashboards. Collaborate faster with other teams by consolidating multiple dashboards within a single application to create a dossier of reports and dashboards.
- New Custom Visualization Gallery. Publicly available library of pre-configured custom visualizations for end users available on MicroStrategy Community.
- Attribute thresholds. Highlight attribute elements in reports and dashboards using conditional thresholds and criteria.
- Easily import custom visualizations. New workflows allow end users to quickly import D3 visualizations with a single click.
- Develop custom visualizations in MicroStrategy Desktop. MicroStrategy Desktop can be used to build custom visualizations with fewer lines of code.

- Work and User Fencing. Fence subscription and distribution workloads to dedicated instances to help avoid stability risk and downtimes, and optimize throughput.
- Support for more data sources. MicroStrategy Analytics allows business users to readily connect to OData and SAS data files. MicroStrategy Analytics also offers certifications for new data sources such as Teradata 16, IBM DB2 11 and the latest Azure® SQL database, and delivers an enhanced native connector to Salesforce.
- Enhanced Big Data connectivity. More push down functions supported with the latest drivers from leading Big Data providers in the market.
- Support for RESTful APIs. Retrieve data from MicroStrategy in JSON format with advanced filtering capabilities to build custom applications.
- New MicroStrategy Enterprise Manager™ dashboards. Newly designed dashboards are available out of the box with MicroStrategy Enterprise Manager to allow administrators to gain high-level operating status of the MicroStrategy environment.
- New map visualization. New base maps support both ESRI® and Google Maps™, and allow multiple layers of information on one map.
- Distribute interactive dashboards. New dashboard distribution capabilities allow users to schedule and send interactive files to thousands of users for offline data discovery.
- Revamped export engine for PDFs. Re-architected export engine allows users to create highly formatted PDFs supporting D3, maps, bookmarks and large grids.

MicroStrategy Analytics Strategy

Our technology strategy is focused on delivering comprehensive platform-based solutions to enable any organization to create immediate value from analytics and then quickly grow its analytics effort to encompass more advanced capabilities as well as larger user and data scale. This strategy includes: expanding support for large information stores, improving performance and administration, enhancing our analysis capabilities, and enhancing report delivery via the Web and mobile devices. We continue to enhance our products for use with a broad range of operating systems and databases to enable our customers to leverage their existing technology investments to achieve faster query times with fewer required resources. We continue to enhance usability and visual data exploration to increase ease of use and functionality, and thus further decrease the need for IT intervention. We are working to further differentiate our products by increasing:

- Visual analysis and user self-service. Ease of use and visual exploration and analysis capabilities on small to extremely large data sets, in conjunction with the enterprise capabilities also offered by our platforms;
- Data capacity. The volume of information that can be efficiently analyzed and utilized;
- User concurrency. The number of users that can be supported simultaneously;
- Analytic sophistication. The range of analytical methods available to the application designer;
- Performance. The throughput and response time of the system, measured in seconds;
- Database flexibility. The range of data sources, data warehouses, and online transaction processing databases that the software is capable of efficiently querying without modification;
- Robustness. The reliability and availability of the software in mission-critical environments;
- Deployability. The ease with which applications can be securely deployed, modified, upgraded, and tuned;
- Personalization. The quality and sophistication of a one-to-one user experience;
- Content flexibility. The range of content, both structured and unstructured, that can be efficiently utilized;

- Media channel and interface flexibility. The range of media channels (including mobile devices), interface options, and display features supported; and
- Transaction capabilities. The ability to efficiently initiate actions and transactions from mobile devices and Web-based dashboards.

MicroStrategy Mobile

Our consistently highly-rated mobile offering extends beyond basic mobile analytics to deliver an innovative mobile app platform that makes building a variety of mobile business apps easier and faster.

MicroStrategy Mobile is fully integrated into the MicroStrategy Analytics platform, so it is easy to leverage existing visualizations, reports and dashboards to instantly deploy mobile business intelligence. In addition, MicroStrategy Mobile extends beyond analytics to enable organizations to rapidly build custom mobile applications that deliver analytics combined with transactions, multimedia and mapping to support business workflows. The robust code-free application development platform is designed to reduce development costs and accelerate the deployment of native mobile business apps—optimized for both iOS and Android. Companies can build fully native iOS and Android apps that take advantage of the unique device and operating system capabilities (e.g., GPS/location, calendar, and camera) on those devices. MicroStrategy Mobile is an easy, fast, and cost-effective vehicle for mobilizing an organization's information systems, including its data warehouses, business intelligence, ERP, CRM, and Web applications that are currently accessible only on the desktop. With MicroStrategy Mobile, businesses can transform their entire workforce into a connected and more productive mobile workforce using information-driven mobile apps that are significantly more robust and secure than their Web-only counterparts. With mobile access to critical corporate data and systems that drive the business, employees can have a virtual office in their hands at all times.

MicroStrategy Mobile is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

Key benefits of MicroStrategy Mobile include:

- Increased employee productivity by gaining new efficiencies and cutting decision times. MicroStrategy Mobile computing can dramatically improve personal productivity, replacing how people write, carry, touch, and decide today. MicroStrategy Mobile puts materials, information, and system access on devices that can be always on, always connected, and always in reach.
- Extending information throughout an organization. MicroStrategy Mobile can help run a business more effectively by extending the reach of critical enterprise systems to all constituents in all locations. It can provide real-time access to the latest information and data-driven visualizations that fuel spontaneous conversations and more effective decision making.
- Conducting business in newer and faster ways. MicroStrategy Mobile context-aware apps that leverage native mobile device functionality (e.g., GPS, camera, etc.) allow users to complete tasks significantly faster or in more efficient ways than Web or desktop-bound apps.
- Fast app development. MicroStrategy Mobile is one of the fastest ways to create new mobile apps and mobile front-ends to existing analytics applications. Its click-to-configure features allow the development of mobile apps in a code free environment without requiring an organization's IT resources. It also allows for the deployment of native apps across multiple operating systems with a single design and lets a user make an app multi-lingual with a few configuration clicks.
- High performance mobilization. MicroStrategy Mobile provides compelling and high-performance MicroStrategy Mobile powered apps that can help maximize impact, durability, and adoption.

MicroStrategy Mobile Releases in 2016

MicroStrategy Mobile currently includes the following significant functional enhancements made during 2016:

- Increased efficiency with new search feature in data-driven input controls. A new search capability in data-driven input controls allows users to quickly find and select desired inputs within long element lists when filling out transactional forms. Users can now use keywords to get real-time responses in the search result, which greatly reduces the time to locate elements.
- Access custom visualizations, including D3, offline. Custom visualizations caching is now supported. In addition to providing offline access, this feature improves the performance of custom visualizations dramatically once cached.
- Streamlined ability to add multiple photos. MicroStrategy Mobile streamlines the workflow to add multiple photos in a transaction. Users have an intermediate step to browse the selected photos, remove/add photos, and edit captions before submitting the photos in the transaction.
- Support for multi-layers on maps for iOS. Layer different datasets on the same map for quick comparison and visual correlation. Each layer can leverage different data visualizations, including markers, bubbles, density, and more. Use the interactive filters to hide and show the multiple layers.
- Ability to export reports to Excel. Export reports directly from mobile devices to Excel for further analysis, and share exported reports via e-mail.
- Enterprise Mobility Management support via AppConfig for iOS. In addition to native integration support with AirWatch®, MobileIron® and Good Dynamics™, MicroStrategy Mobile provides native integration to configure and help secure iOS apps based on AppConfig guidelines. The integration with AppConfig provides more consistent, open and simple ways to configure and help secure mobile apps.
- Improved native Android mobile client. MicroStrategy Mobile delivers increased functionality in its Android mobile client, introducing integration with push notifications and support for D3 visualizations.
- Improved visualizations and charts for MicroStrategy Mobile. MicroStrategy Mobile is now able to support a greater number of popular, Web-based visualizations from the Custom Visualization Gallery, such as the KPI and Funnel visualizations. MicroStrategy Mobile now also supports custom properties and color palettes for D3 custom visualizations. Enhancements to the combination charts also allow users to render Ticker, Circle and Square chart types on MicroStrategy Mobile, allowing for richer data visualizations.
- Customizable error messages on iOS mobile devices. MicroStrategy Mobile for iOS now supports customized error messages, expanding the ability to communicate across devices. Users can create error messages that reflect specific issues that they may be encountering when manipulating data.
- Unified mapping for easier maintenance and seamless user experience. As in MicroStrategy Web, a single, unified map visualization supporting both ESRI and Google base maps, can now render functionalities seamlessly on iOS and Android devices. Consolidating two map visualizations into one can reduce long-term maintenance costs and improve map usability and the deployment process for users.
- View multiple layers on maps in dashboards. On iOS, users can now leverage multiple layers to visualize different metrics or datasets, each using a different visualization type (e.g., areas, bubbles, markers or density map). This capability enables users to overlay information and visually correlate data points on a single map view.
- Help secure Android apps with native AirWatch integration. We released a new Android AirWatch SDK that provides customers with a reliable integration with AirWatch to deploy Android apps to authorized devices and users. With the new Android AirWatch SDK, users can enable data loss prevention settings to protect sensitive data and restrict moving content outside the app.

MicroStrategy Mobile Technology Strategy

We continue to invest in enhancing MicroStrategy Mobile to empower our customers with the ability to build apps that drive their businesses forward and deliver revolutionary applications to their employees, partners, prospects, and customers. We continue to invest in enhancing MicroStrategy Mobile's overall performance and security as well as its three core capability areas: analytics, transactions, and multimedia. We remain focused on delivering the most compelling native end user experience on devices that are adopted by enterprises. New features specific to supported operating systems will take advantage of the native API's and incorporate new OS capabilities into apps built by our customers.

We also continue to invest in bringing to life mobile apps in an easy, fast, and flexible way. We will continue to enhance our MicroStrategy Mobile technology to deliver an experience that is philosophically "user first" by combining a powerful user experience on top of a dynamic and accessible development infrastructure.

Usher

Usher is a digital credential and identity intelligence offering that provides a highly secure, convenient way for organizations to dematerialize traditional forms of identity verification (such as passwords, tokens, and physical badges) and replace them with a single mobile identity badge that is cryptographically linked to its owner's smartphone and dynamically linked to an enterprise's existing identity repositories. Usher can be used as a powerful enterprise productivity and workforce management resource because it is designed to enable managers to gain an almost real-time window into the location and activity of their distributed workforces, while providing powerful interactive features to manage or direct them. With the addition of Usher Professional, administrators can track user activity on a nearly real-time map using access telemetry. They can also engage in two-way communications with users from the Usher application. Usher works on standard smartphones running on iOS or the Android platform, and boasts an Apple Watch integration. Through the use of Bluetooth, QR codes, biometrics, push notifications, time-limited PIN codes, and other authentication methods, Usher users can log into applications, VPNs, and workstations, unlock doors and other physical gateways, and validate each other's identities. By delivering strong, multi-factor authentication that can be extended to nearly every corporate system, Usher's digital credential solution addresses some of the biggest challenges facing corporations today, including authentication, identity and access management, and resource authorization, while applying industry leading business intelligence and analytics to an enterprise's infrastructure. Usher is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

Usher can appeal to businesses, universities, associations, governments, and other organizations because it adds a layer of security to their systems, physical spaces, and transactions that would otherwise be technically difficult or cost-prohibitive. Usher is designed to secure an enterprise by offering an alternative to existing forms of identification and authentication. Usher is designed to provide a more secure alternative to passwords, which can be stolen or cracked. Usher is also designed to help reduce identity-related fraud by replacing physical ID cards that can be counterfeited and stolen.

Key benefits of Usher include:

- Identity protection. Usher mobile identities are designed to be more secure than traditional physical forms of identity, which can be stolen and counterfeited.
- Authentication. Usher is designed to provide a more secure alternative to passwords — which can be the weak link exploited by cybercrime attacks — with secure mobile identities.
- Physical access control. Usher users can unlock doors by tapping on a "digital key" or by scanning a QR code. If a device is Bluetooth-enabled, a user can unlock a door simply by approaching it.
-

Workforce management. Usher can collect data about the locations of users' Usher activity, enabling managers to remotely monitor and direct distributed workforces.

- Activity analysis. Usher uses MicroStrategy 10 to monitor and analyze Usher user activity.
- Convenience and cost-effectiveness. Usher allows users to carry their business credentials in digital form on their smartphones. Enterprises can reduce costs associated with the distribution and

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management of physical badges, cards, and keys, as well as the costs associated with identity-related fraud and cybercrime.

Usher Technology Strategy

Our technology strategy for Usher is focused on taking advantage of developments in mobile and cloud technology to provide more flexible and powerful user identity-based security and analytics solutions. This involves continued development in the following areas:

- Logical access. We continue to explore new techniques with which Usher can provide identity to applications and systems and provide alternatives to passwords, keys, and fobs. Our focus is on seamless, zero-click access based on proximity. Additionally, we continue to monitor the market and test new biometric measurement systems that can be integrated into Usher, such as Apple's Touch ID, voice authentication, and facial recognition.
- Physical access. We continue to expand on the integration of Usher with physical access control systems and hardware, so that users with adequate credentials and digital keys can unlock secure doorways.
- Action-oriented intelligence. We are focusing on enhancing Usher's ability to determine Usher member location and activities so that trends and anomalies can be used to provide better security or better workforce management.

MicroStrategy Cloud

MicroStrategy Cloud offers an integrated and optimized cloud business analytics platform that combines infrastructure, technology, people, and processes to offer analytics as a service to our customers. MicroStrategy Cloud builds on MicroStrategy 10, and adds class-leading ETL and database technology to provide an agile, high performance, elastic, and cost-effective analytics platform.

MicroStrategy Cloud provides our customers MicroStrategy 10 offerings through a Platform-as-a-Service (PaaS) solution hosted in the cloud. In addition to MicroStrategy Analytics and MicroStrategy Mobile, MicroStrategy Cloud also offers data integration ETL and data hosting services. The MicroStrategy Cloud PaaS provides customers with infrastructure (data center space, rack space, power, cooling, and servers), technology platforms (analytics, mobile data integration, and data hosting), operations, support, and expert analytics practitioners for a subscription fee with no upfront capital investment. MicroStrategy Cloud can offer improved time to market, higher performance, and lower overall total cost of ownership compared to traditional on-premise deployments.

MicroStrategy Analytics are offered on the AWS Marketplace® as a self-service customer managed solution where customers can launch their own MicroStrategy environments within minutes and start using our full MicroStrategy Analytics offering at a subscription or yearly fee.

Key benefits of MicroStrategy Cloud include:

- Agile rapid application development and secure deployment. MicroStrategy Cloud provides the infrastructure, technology, processes, and experts that a customer needs to develop and securely deploy applications quickly. The entire service has been pre-packaged and optimized, and is supported by expert analytics practitioners. This solution allows our customers to get to market much more quickly than traditional approaches and react to business changes as they happen.
- High performance analytics applications. MicroStrategy Cloud combines the high performance characteristics of MicroStrategy Analytics and MicroStrategy Mobile with high performance servers and network infrastructure. This integration allows our customers to deploy analytics and mobile applications on demand, allowing them to serve their customers more quickly and efficiently.
- Elastic capacity with no capital investment. MicroStrategy Cloud allows customers to get started with no upfront capital investment in infrastructure. Customers can start small and increase their capacity on demand.

- Low overall total cost of ownership. IT application costs are driven by capital investments and the personnel cost associated with hiring a staff of experts to build, maintain, and tune a large-scale environment. MicroStrategy Cloud delivers this high performance, tuned, and monitored environment as a service, lowering overall total cost of ownership.
- Global availability. Leveraging AWS, MicroStrategy Analytics is now available in all AWS data centers spanning 16 regions on 5 continents.

MicroStrategy Cloud Technology Strategy

MicroStrategy Cloud offers organizations an alternate purchase and deployment model for business analytics, compared to traditional on-premise deployments. Instead of making large upfront capital investments and building large support teams, MicroStrategy Cloud allows organizations to purchase analytics as a service with no upfront capital investments. Instead, it offers a payment structure that scales with the business requirements.

Our MicroStrategy Cloud technology strategy is focused on continuing to enhance the reliability, self-service, performance, and scalability of our offering. We also seek to differentiate our offering by investing in enhancing the security process and infrastructure around our service, monitoring existing security and compliance certifications, and obtaining new certifications.

Product Support and Other Services

MicroStrategy Services™ is comprised of the following services lines:

MicroStrategy Technology Services

The Technology Services department improves the customer experience with MicroStrategy and provides technical product support to customers and partners specific to MicroStrategy software products. Additionally, Technology Services is responsible for negotiating and maintaining support contracts with our customers and partners alike, including support services for MicroStrategy Cloud customers. The department is comprised of the following groups:

Customer Support Group (CSG). CSG is a team of Technical Support Engineers responsible for providing first level technical support to customers, partners, and prospects.

Advanced Product Support (APS). APS is a team of product specialists responsible for providing second level technical support to our worldwide call centers, customers, partners, and prospects.

Premium Support. Premium support is a team of Premium Support Engineers that provides dedicated technical support to our elite customers and partners.

Customer Success Management (CSM). The customer success group manages our support renewal business and our process for renewing software maintenance contracts with customers worldwide. It also helps answer questions from customers while working with those customers on renewing their maintenance contracts. The team also works with customers quarterly to ascertain the customer’s current level of satisfaction.

MicroStrategy Professional Services™

MicroStrategy Professional Services provides our customers with consulting and advisory expertise to help drive critical analytics and mobile solutions across key industries. We utilize our deep expertise, thought leadership, and extensive MicroStrategy resources to guide our customers in defining, developing, and delivering core business analytics solutions for their enterprises. These solutions provide our customers with greater access to critical business information and help them make better business decisions faster. As a unified team with MicroStrategy product engineering, technical support and account executives, MicroStrategy Professional Services delivers world-class advisory services to our customers to help maximize the value of the MicroStrategy platform. We differentiate ourselves in the following ways:

Experience and expertise. With MicroStrategy Professional Services customers worldwide across many industries, we leverage our deep institutional knowledge to help achieve a high return on investment (“ROI”) for customers.

Thought leadership and innovation. Our consultants not only follow best practices, they also create them. We help drive real business results that benefit our customers’ bottom lines, enterprise-wide.

One MicroStrategy. Our consultants work with the backing of the MicroStrategy product engineering, technical support and account teams to continue to partner with customers to help ensure a high adoption rate, positive ROI, and increased BI maturity.

MicroStrategy Professional Services is a worldwide organization with operations in North America, South America, Europe, and Asia Pacific, delivering projects to customers across all major industries. Our Global Delivery Center™ (“GDC”) is key to our global delivery model. Located in Warsaw, Poland, the GDC is a hub of several hundred consultants who support analytics projects directly at customer sites around the world or remotely. With functional and business management practices, the appropriate experts can transition on and off projects as needed. The GDC can quickly scale up or down to meet unique technical and industry requirements. Integrating the GDC with on-site project resources is a flexible and cost-efficient way to receive highly specialized services.

MicroStrategy Education Services

MicroStrategy Education Services offers education solutions and skill set development for customers and partners. Our expansive course catalog is built on content to develop specialist, master or expert skills for analysts, developers, administrators and end users. We provide our customers with multiple learning options by offering our courses through online instructor-led courses, private on-site engagements, and self-paced on-demand courses. Our certified MicroStrategy training consultants also develop an ongoing education program to meet our customers’ specific business needs.

Marketing and Sales and Services Strategy

Our business objective is to become the leading enterprise software platform provider for analytics and mobility to the largest enterprises, governments, and the largest databases and data providers in the world. Synergies between sales and marketing to help grow the Company and improve market momentum include the following key elements:

Marketing Strategy

Our marketing programs target the following principal constituencies:

- Our historical base of corporate technology buyers and departmental technology buyers across FORTUNE™ Global 2000 enterprises. We also target senior executives and other leaders in these companies for MicroStrategy Mobile and Usher;
- Corporate and departmental technology buyers in mid-sized enterprises;
- Government technology buyers and the vendors to the government community;

- Independent software vendors that want to embed our technology tools in their solutions; and
- System integrators that have technology relationships with the largest enterprises, governments, and information-intensive businesses.

We continually seek to increase our brand awareness by focusing our messaging on the possibilities for value creation and the benefits of using our platforms, and competitive differentiators. The channels we use to communicate with these constituencies include:

- User conferences;
- Advertising;
- Direct e-mail;
- Free and evaluation software;
- Industry awards;
- Industry events;
- Media coverage;
- Mobile application downloads;
- Our Website;
- Social media;
- Channel partners; and
- Word of mouth and peer references.

Each quarter in 2016, we hosted symposia events in cities across North America, Europe, the Middle East and Asia. These events offered IT and business users an opportunity to network, attend workshops, and learn about real-world MicroStrategy 10 applications from our customers. These events also featured topics on analytics and mobile applications in retail, banking, higher education, healthcare and other sectors being transformed by Big Data. We will continue to host symposia events where we will highlight opportunities to drive the adoption of business intelligence across organizations, reduce costs through tool consolidation, and empower the workforce to be more productive – all of which can help attendees plan and achieve their analytics goals.

Sales and Services Strategy

We primarily sell through our dedicated sales force, as well as through channel partners in order to increase market coverage in both domestic and international markets. We provide financial incentives for our channel partners to market and distribute our products and services. We also offer a comprehensive set of educational programs that enhance our potential customers' and channel partners' understanding of our software. Furthermore, we offer a wide range of services that provide support in the discovery, planning, development, and deployment stages of a MicroStrategy product or service.

Dedicated Sales Force. We market our software and services chiefly through our direct sales force. We have sales offices in locations throughout the world. We use distributors in several countries where we do not have sales offices.

Channel Partners. We have established strategic alliances with third party vendors to help ensure the success of our customers' business intelligence initiatives. Our vendors include companies that are system integrators and consulting firms, resellers, value-added resellers, original equipment manufacturers ("OEMs"), and technology partners. These firms utilize MicroStrategy platforms for a variety of commercial purposes and our agreements with them generally provide non-exclusive rights to market our products and services and allow access to our marketing materials, product training, and direct sales force for field-level assistance.

We make significant commitments to our channel partners, including investments in joint development including technical training and certifications, pre-sales and sales enablement, and marketing programs. Through our joint efforts, we believe customers are able to minimize their risk and maximize the return on their business intelligence projects. We believe that our channel partners allow us to leverage sales and service resources, as well as marketing and industry-specific expertise, to expand our user base and increase our market coverage.

Customers

Our customers include leading companies from a range of industries, as well as the public sector. Below is a representative list of organizations that currently use our products and services.

Retail: Coach; Co-op; Deichmann SE; Giant Tiger Stores Limited; GUESS?, Inc.; La Perla; Lowe’s Companies, Inc.; New York & Company, Inc.; Pacific Sunwear of California, Inc.; Spar Austria; Staples, Inc.; The Container Store, Inc.

Financial Services and Insurance: Banco Bilbao Vizcaya Argentaria, S.A. (BBVA); Bankia; Caisse d’Epargne Cote d’Azur; Länsförsäkringar AB; Société Générale S.A.; Zurich Insurance Group

Pharmaceutical and Healthcare: Ceva Sante Animale; Cincinnati Children’s Medical Center; HealthTrust; NHS Scotland’s Golden Jubilee National Hospital; Vizient

Manufacturing: Cardinal Glass Industries; Kinross Gold Corporation; Michelin; Republic National Distributing Company, LLC; Rite-Hite Holding Corporation; The Sherwin-Williams Company; Watsco; Weiler Corporation; Wilton Industries, Inc.

Technology, Media, and Telecommunications: Adobe; Amazon; AutoTrader.com; BMC Software; eBay Inc.; eHarmony; Eyefreight; Facebook; Houghton Mifflin Harcourt; Iridium Communications Inc.; Keysight Technologies; LinkedIn Corporation; Netflix, Inc.; The Nielsen Company; Sonic Automotive; Thomson Reuters; Yahoo!

Consumer Goods: Grupo Alsea Mexico; Chiquita Brands International, Inc.; Danone; Dr Pepper Snapple Group, Inc.; Electronic Partner Benelux; McCain Foods

Government, Public Services, and Education: American University; Brussels Airport; Centers for Medicare & Medicaid Services; City of Austin (TX); DFW International Airport; International Post Corporation; Texas Department of Transportation; Transportation Security Administration (US); U.S. Postal Service; Virginia Tech

Restaurants: Chipotle Mexican Grill, Inc.; Domino’s Pizza, Inc.; Logan’s Roadhouse, Inc.; Starbucks Coffee Company

Hospitality and Leisure: 24 Hour Fitness; Accor S.A.; Hilton Worldwide; Omega World Travel; Orbitz Worldwide; Royal Caribbean International; Starwood Hotels & Resorts Worldwide, Inc.; Tsogo Sun

Competition

MicroStrategy 10 and MicroStrategy Cloud Competitors

The analytics market is highly competitive and subject to rapidly changing technology paradigms. Within the analytics space, we compete with many different vendors, including (i) large software vendors, such as IBM (Cognos), SAP (BO), Microsoft (Power BI), and Oracle (OBIEE), that provide one or more products that directly compete with our products, (ii) open source analytics vendors such as OpenText Analytics and Hitachi (Pentaho®), (iii) various other analytics software providers, such as Qlik, Tableau Software, TIBCO, Information Builders, and the

SAS Institute, and (iv) other vendors offering cloud-based offerings, such as GoodData and Birst. Our future success depends on the effectiveness with which we can differentiate and compete with these vendors and other potential competitors across analytics implementation projects of varying sizes. Failure to maintain adequate technology differentiation from these competitors could materially adversely affect our revenue from both existing and prospective customers.

MicroStrategy Mobile Competitors

The market for mobile analytics is rapidly evolving. New mobile devices are being introduced in the market at a rapid pace, and enhancements to mobile operating systems are being made at an even faster rate. The rapidly changing technology landscape creates opportunities for both existing competitors and new vendors to introduce innovative new products. Within the mobile analytics space, we predominantly compete with the same set of analytics vendors that we compete with in the analytics market. Our competitiveness in this market will depend on how quickly we can adapt to the changing technology landscape and how effectively we sell, market, and differentiate our offering.

Usher Competitors

Usher competes with companies with technologies categorized as user authentication products. These competitors focus primarily on traditional forms of identity verification such as smart cards, tokens, and password managers. These companies have significant name recognition and offer solutions with security architectures that are familiar to IT buyers. Usher also competes with companies with newer solutions, often involving mobile technology.

2014 Restructuring Plan

In the third quarter of 2014, we committed to a restructuring plan (the “2014 Restructuring Plan”) to streamline our workforce and spending to better align our cost structure with our business strategy, including reducing our workforce by 777 employees. We implemented substantially all of the 2014 Restructuring Plan by the end of 2014. The 2014 Restructuring Plan resulted in pre-tax restructuring charges of $0.3 million and $14.7 million for the years ended 2015 and 2014, respectively. Pre-tax restructuring charges were not material for the year ended 2016. We do not expect any future costs associated with the 2014 Restructuring Plan. See Note 8, Restructuring, to the Consolidated Financial Statements in “Part IV. Item 15. Exhibits, Financial Statement Schedules” of this Annual Report on Form 10-K for further detail on the 2014 Restructuring Plan. In addition to the 2014 Restructuring Plan, we have implemented other internal cost-savings initiatives.

Employees

As of December 31, 2016, we had a total of 2,133 employees, of whom 1,048 were based in the United States and 1,085 were based internationally. Of our 2,133 employees, 587 were engaged in sales and marketing, 512 in research and development, 711 in subscription, product support, consulting, and education services, and 323 in finance, administration, and corporate operations. None of our employees in the United States is represented by a labor union; however, in certain foreign subsidiaries some employees are members of trade or local unions. In France, our employees are represented by a works council as required by local law. We have not experienced any work stoppages and consider our relations with our employees to be good.

The following table summarizes employee headcount as of the dates indicated and reflects changes resulting from the 2014 Restructuring Plan as well as new hires and terminations outside the 2014 Restructuring Plan:

	December 31, 2014	December 31, 2015	December 31, 2016
Subscription services	57	37	48
Product support	138	131	171
Consulting	600	467	453
Education	24	28	39

Sales and marketing	662	513	587
Research and development	645	461	512
General and administrative	344	310	323
Total headcount	2,470	1,947	2,133

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Research and Product Development

We maintain a dedicated performance engineering team and conduct research and development focused on providing our customers with the highest levels of performance for analytics applications of all sizes and security solutions. The description of research and development expenses in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” includes a breakdown of such expenses. We believe that our future performance will depend in large part on our ability to maintain and enhance our current product line, develop new products that achieve market acceptance, maintain technological competitiveness, and meet an expanding range of customer requirements.

Available Information

Our Website is located at www.microstrategy.com. We make available free of charge, on or through the Investor Relations section of our Website (http://ir.microstrategy.com), our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports, as soon as reasonably practicable after electronically filing such reports with the Securities and Exchange Commission (“SEC”). Information found on our Website is not part of this Annual Report or any other report filed with the SEC. The public may read and copy any materials filed by the Company with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Item 1A. Risk Factors

You should carefully consider the risks described below before making an investment decision. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

If any of the following risks occur, our business, financial condition, or results of operations could be materially adversely affected. In such case, the market price of our class A common stock could decline and you may lose all or part of your investment.

Our quarterly operating results, revenues, and expenses may fluctuate significantly, which could have an adverse effect on the market price of our stock

For many reasons, including those described below, our operating results, revenues, and expenses have varied in the past and may vary significantly in the future from quarter to quarter. These fluctuations could have an adverse effect on the market price of our class A common stock.

Fluctuations in Quarterly Operating Results. Our quarterly operating results may fluctuate, in part, as a result of:

- the size, timing, volume, and execution of significant orders and shipments;
- the mix of products and services ordered by customers, including product licenses and subscription offerings, which can affect the extent to which revenue is recognized immediately or over future quarterly periods;
- the timing of the release or delivery of new or enhanced offerings, which may affect the period in which we can recognize revenue;
- the timing of announcements of new offerings by us or our competitors;
- changes in our pricing policies or those of our competitors;
- market acceptance of new and enhanced versions of our products and services;
- the length of our sales cycles;
- seasonal or other buying patterns of our customers;
- changes in our operating expenses, including as a result of various cost-saving initiatives that we are implementing;
- planned major maintenance activities related to our corporate aircraft;
- the timing of research and development projects and the capitalization of software development costs;
- personnel changes, including as a result of our recent executive management reorganization;
- our use of channel partners;
- utilization of our consulting and education services, which can be affected by delays or deferrals of customer implementation of our software products;
- changes in foreign currency exchange rates;
- our profitability and expectations for future profitability and their effect on our deferred tax assets and net income for the period in which any adjustment to our net deferred tax asset valuation allowance may be made;
- increases or decreases in our liability for unrecognized tax benefits; and
- changes in customer decision making processes or customer budgets.

Limited Ability to Adjust Expenses. We base our operating expense budgets on expected revenue trends and strategic objectives. Many of our expenses, such as office leases and certain personnel costs, are relatively fixed. We may be unable to adjust spending quickly enough to offset any unexpected revenue shortfall. Accordingly, any shortfall in revenue may cause significant variation in operating results in any quarter. For example, although we have reduced our operating expenses in certain recent periods, if our revenues in the future are not sufficient to offset our operating expenses, or we are unable to adjust our operating expenses in a timely manner in response to any shortfall in anticipated revenue, we may incur operating losses.

Based on the above factors, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. It is possible that in one or more future quarters, our operating results may be below the expectations of public market analysts and investors. In that event, the market price of our class A common stock may fall.

The market price of our class A common stock has been and may continue to be volatile

The market price of our class A common stock historically has been volatile and may continue to be volatile. The market price of our class A common stock may fluctuate widely in response to various factors, some of which are beyond our control. These factors include, but are not limited to:

- quarterly variations in our results of operations or those of our competitors;
- announcements about our earnings that are not in line with analyst expectations, the likelihood of which may be enhanced because it is our policy not to give guidance relating to our anticipated financial performance in future periods;
- announcements by us or our competitors of acquisitions, dispositions, new offerings, significant contracts, commercial relationships, or capital commitments;
- the emergence of new sales channels in which we are unable to compete effectively;
- our ability to develop, market, and deliver new and enhanced offerings on a timely basis;
- commencement of, or our involvement in, litigation;
- any major change in our Board of Directors, management, or governing documents;
- changes in governmental regulations or in the status of our regulatory approvals;
- recommendations by securities analysts or changes in earnings estimates;
- announcements by our competitors of their earnings that are not in line with analyst expectations;
- the volume of shares of our class A common stock available for public sale;
- sales or purchases of stock by us or by our stockholders, and issuances of awards under our stock incentive plan;
- short sales, hedging, and other derivative transactions involving shares of our class A common stock; and
- general economic conditions and slow or negative growth of related markets.

In addition, the stock market in general, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of technology companies. These broad market and industry factors may seriously harm the market price of our class A common stock, regardless of our actual operating performance.

We may not be able to sustain or increase profitability in the future

We generated net income for each of the fiscal years ended December 31, 2016, 2015, and 2014; however, we may not be able to sustain or increase profitability on a quarterly or annual basis in the future. If our revenues are not sufficient to offset our operating expenses, or we are unable to adjust our operating expenses in a timely manner in response to any shortfall in anticipated revenue, our profitability may decrease, we may cease to be profitable, or we may incur operating losses. As a result, our business, results of operations, and financial condition may be materially adversely affected.

As of December 31, 2016, we had $11.7 million of deferred tax assets, net of a $0.8 million valuation allowance. If we are unable to sustain profitability in the future, we may be required to increase the valuation allowance against these deferred tax assets, which could result in a charge that would materially adversely affect net income in the period in which the charge is incurred.

Economic uncertainty, particularly in the retail industry, could materially adversely affect our business and results of operations

In recent years, the U.S. and other significant markets have experienced cyclical downturns and worldwide economic conditions remain uncertain. Economic uncertainty and associated macroeconomic conditions make it extremely difficult for our customers and us to accurately forecast and plan future business activities, and could cause our customers to slow spending on our products and services, which could delay and lengthen sales cycles. Furthermore, during uncertain economic times, our customers may face issues gaining timely access to sufficient credit, which could result in an impairment of their ability to make timely payments to us. If that were to occur, we may be required to increase our allowance for doubtful accounts and our results would be negatively impacted.

Furthermore, we have a significant number of customers in the retail industry. A significant downturn in this industry may cause organizations to reduce their capital expenditures in general or specifically reduce their spending on information technology. In addition, customers in this industry may delay or cancel information technology projects or seek to lower their costs by renegotiating vendor contracts. Customers with excess information technology resources may choose to develop in-house software solutions rather than obtain those solutions from us. Moreover, competitors may respond to challenging market conditions by lowering prices and attempting to lure away our customers.

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

We may have exposure to greater than anticipated tax liabilities

We are subject to income taxes and non-income taxes in a variety of domestic and foreign jurisdictions. Our future income taxes could be materially adversely affected by earnings that are lower than anticipated in jurisdictions where we have lower statutory rates, earnings that are higher than anticipated in jurisdictions where we have higher statutory rates, changes in the valuation of our deferred tax assets and liabilities, changes in the amount of unrecognized tax benefits, or changes in tax laws, regulations, accounting principles, or interpretations thereof.

Further changes in the tax laws of foreign jurisdictions could arise, including as a result of the base erosion and profit shifting (“BEPS”) project undertaken by the Organisation for Economic Co-operation and Development (“OECD”). The OECD, which represents a coalition of member countries, has issued recommendations that, in some cases, would make substantial changes to numerous long-standing tax positions and principles. These contemplated changes, some of which have been adopted or are under active consideration by OECD members and/or other countries, could increase tax uncertainty and may adversely affect our provision for income taxes. In addition, in the United States, proposals for broad reform of the existing corporate tax system are under evaluation by various legislative and administrative bodies and by the new Presidential administration, but the likelihood of enactment of any such proposals (whether in their current forms or with modifications) is unclear, and it is not possible to accurately determine their overall impact on our effective tax rate at this time.

Our determination of our tax liability is subject to review by applicable domestic and foreign tax authorities. Any adverse outcome of such reviews could have an adverse effect on our operating results and financial condition. The determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment and, in the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. Moreover, as a multinational business, we have subsidiaries that engage in many intercompany transactions in a variety of tax jurisdictions where the ultimate tax determination is uncertain.

We also have contingent tax liabilities that, in management's judgment, are not probable of assertion. If such unasserted contingent liabilities were to be asserted, or become probable of assertion, we may be required to record significant expenses and liabilities in the period in which these liabilities are asserted or become probable of assertion.

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

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

Nearly all of our revenues to date have come from sales of analytics products and related technical support, consulting, and education services. We expect these sales to account for a large portion of our revenues for the foreseeable future. Although demand for analytics products has grown in recent years, the market for analytics offerings continues to evolve. Resistance from consumer and privacy groups to increased commercial collection and use of data on spending patterns and other personal behavior, governmental restrictions on the collection, use, and transfer of personal data, and other developments may impair the further growth of this market. We cannot be sure that this market will continue to grow or, even if it does grow, that businesses will adopt our solutions.

We have spent, and intend to keep spending, considerable resources to educate potential customers about analytics offerings in general and our offerings in particular. However, we cannot be sure that these expenditures will help any of our offerings achieve any additional market acceptance. If the market fails to grow or grows slower than we currently expect or businesses fail to adopt our offerings, our business, operating results, and financial condition could be materially adversely affected.

Our products face intense competition, which may lead to lower prices for our products and services, reduced gross margins, loss of market share, and reduced revenue

The analytics market is highly competitive and subject to rapidly changing technology paradigms. Within the analytics space, we compete with many different vendors, including (i) large software vendors, such as IBM (Cognos), SAP (BO), Microsoft (Power BI), and Oracle (OBIEE), that provide one or more products that directly compete with our products, (ii) open source analytics vendors, such as OpenText Analytics and Hitachi (Pentaho), (iii) various other analytics software providers, such as Qlik, Tableau Software, TIBCO, Information Builders, and the SAS Institute, and (iv) other vendors offering cloud-based offerings, such as GoodData and Birst. Our future success depends on the effectiveness with which we can differentiate and compete with these vendors and other potential competitors across analytics implementation projects of varying sizes. Failure to maintain adequate technology differentiation from these competitors could materially adversely affect our revenue from both existing and prospective customers.

Some of our competitors have longer operating histories and significantly greater financial, technical, and marketing resources than we do. As a result, they may be able to respond more quickly to new or emerging technologies and changes in customer requirements or devote greater resources to the development, promotion, sale, and marketing of their offerings than we can, such as offering certain analytics products free of charge when bundled with other software offerings. In addition, many of our competitors have strong relationships with current and potential customers, extensive industry and specialized business knowledge, as well as corresponding proprietary technologies that they can leverage, such as multidimensional databases and ERP repositories. As a result, they may be able to prevent us from penetrating new accounts or expanding within existing accounts.

Increased competition may lead to price cuts, reduced gross margins, and loss of market share. We may not be able to compete successfully against current and future competitors, and the failure to meet the competitive pressures we face may have a material adverse effect on our business, operating results, and financial condition.

Current and future competitors may also make strategic acquisitions or establish cooperative relationships among themselves or with others. By doing so, these competitors may increase their ability to meet the needs of our potential customers by their expanded offerings. Our current or prospective channel partners may establish cooperative relationships with our current or future competitors. These relationships may limit our ability to sell our analytics offerings through specific distribution channels. Accordingly, new competitors or alliances among current and future competitors may emerge and rapidly gain significant market share. These developments could limit our ability to obtain revenues from new customers and to sustain software maintenance revenues from our installed customer base. In addition, basic office productivity software suites, such as Microsoft Office, could evolve to offer advanced analysis and reporting capabilities that may reduce the demand for our analytics offerings.

Usher competes with companies with technologies categorized as user authentication products. These competitors focus primarily on traditional forms of identity verification such as smart cards, tokens, and password managers. These companies have significant name recognition and offer solutions with security architectures that are familiar to IT buyers. Usher also competes with companies with newer solutions, often involving mobile technology. To date, we have expended significant resources in the development and marketing of Usher, which has not generated significant revenues. Failure to adequately differentiate and market our technology from these competitors could materially adversely affect our ability to generate significant revenues from Usher.

We depend on revenue from a single suite of products and related services

Our MicroStrategy Analytics, MicroStrategy Mobile, and MicroStrategy Cloud products and related services account for a substantial portion of our revenue. Because of this revenue concentration, our business could be harmed by a decline in demand for, or in the adoption or prices of, these products and related services as a result of, among other factors, any change in our pricing model, increased competition, maturation in the markets for these products, or other risks described in this Annual Report.

If we are unable to develop and release product enhancements and new offerings to respond to rapid technological change in a timely and cost-effective manner, our business, operating results, and financial condition could be materially adversely affected

The market for our offerings is characterized by rapid technological change, frequent new product introductions and enhancements, changing customer demands, and evolving industry standards. The introduction of offerings embodying new technologies can quickly make existing offerings obsolete and unmarketable. We believe that our future success depends largely on our ability to:

- continue to support a number of popular operating systems and databases;
- maintain and improve our current offerings; and
- rapidly develop new offerings and product enhancements that achieve market acceptance, maintain technological competitiveness, and meet an expanding range of customer requirements.

Analytics applications are inherently complex, and it can take a long time and require significant research and development expenditures to develop and test new offerings and product enhancements. In addition, customers may delay their purchasing decisions because they anticipate that new or enhanced versions of our offerings will soon become available. We cannot be sure that we will succeed in developing, marketing, and delivering on a timely and cost-effective basis new or enhanced offerings that respond to technological change or new customer requirements, nor can we be sure that any new or enhanced offerings will achieve market acceptance. Moreover, even if we introduce a new offering, we may experience a decline in revenues of our existing offerings that is not fully matched by the new offering's revenue. For example, customers may delay making purchases of a new offering to permit them to make a more thorough evaluation of the offering, or until industry and marketplace reviews become widely available. Some customers may hesitate migrating to a new offering due to concerns regarding the complexity of migration and product infancy issues on performance. In addition, we may lose existing customers who choose a competitor's offering rather than migrate to our new offering. This could result in a temporary or permanent revenue shortfall and materially adversely affect our business.

A substantial customer shift from the deployment of MicroStrategy Analytics based on a perpetual software license to our cloud services offerings could affect the timing of revenue recognition and materially adversely affect our operating results

We offer our analytics platform in the form of a perpetual software license and a cloud-based platform-as-a-service subscription. The payment streams and revenue recognition timing for our perpetual software licenses are different from those for our subscription services. For perpetual software licenses, customers typically pay us a lump sum soon after entering into a software license agreement and revenue is typically recognized upon delivery of the software to the customer. For subscription services, customers typically make periodic payments over the subscription period and revenue is typically recognized ratably over the subscription period. As a result, if a substantial number of current or new customers shift to subscribing to our cloud services offerings instead of purchasing perpetual software licenses for MicroStrategy Analytics, the resulting change in payment terms and revenue recognition may materially adversely affect our operating results and cash flows for the reporting periods during which such a shift occurs.

Our investment in new business strategies and initiatives could disrupt the operations of our ongoing business and present risks that we have not adequately anticipated

We have invested, and in the future may invest, in new business strategies and initiatives. For example, in recent years we have introduced a number of innovative technologies designed to enable companies to capitalize on Big Data, mobile applications, cloud-based services, and security trends in the marketplace. These endeavors may involve significant risks and uncertainties, including distraction of management from other business operations, the dedication of significant research and development, sales and marketing, and other resources to these new initiatives at the expense of our other business operations, generation of insufficient revenue to offset expenses associated with new initiatives, incompatibility of our new technologies with third-party platforms, inadequate return of capital, and other risks that we may not have adequately anticipated. For example, we have expended significant resources in the development and marketing of Usher, which has not generated significant revenues to date. Because new strategies and initiatives are inherently risky, these strategies and initiatives may not be successful and could materially adversely affect our financial condition and operating results.

Business disruptions, including interruptions, delays, or failures of our systems, third-party data center hosting facilities or other third-party services, could materially adversely affect our operating results or result in a material weakness in our internal controls that could adversely affect the market price of our stock

A significant portion of our research and development activities or certain other critical business operations are concentrated in facilities in Northern Virginia, China, and Poland. In addition, we serve our customers, and manage certain critical internal processes, using third-party data center hosting facilities located in the United States and England and other third-party services, including Amazon Web Services and other cloud services. We could experience a disruption or failure of our systems, or the third-party hosting facilities or other services that we use. Such disruptions or failures could include a major earthquake, fire, cyber-attack, act of terrorism or other catastrophic event, as well as power outages or telecommunications infrastructure outages, or a decision by one of our third-party service providers to close facilities that we use without adequate notice or other unanticipated problems with the third-party services that we use, including a failure to meet service standards.

We are a highly automated business and any such disruptions or failures could (i) result in the destruction or disruption of any of our critical business operations, controls or procedures, or information technology systems, (ii) severely affect our ability to conduct normal business operations, including delaying completion of sales and provision of services, (iii) result in a material weakness in our internal control over financial reporting, (iv) cause our customers to terminate their subscriptions, (v) result in our issuing credits to customers or paying penalties or fines, (vi) harm our reputation, (vii) adversely affect our attrition rates or our ability to attract new customers, or (viii) cause our offerings to be perceived as not being secure, any of which could materially adversely affect our future operating results.

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

In addition to our direct sales force, we use channel partners such as resellers, value-added resellers, system integrators, consulting firms, original equipment manufacturers, and technology partners to license and support our products. For the year ended December 31, 2016, transactions by channel partners for which we recognized revenues accounted for 16.9% of our total product licenses revenues. Our channel partners may offer customers the products and services of several different companies, including offerings that compete with ours. Because our channel partners generally do not have an exclusive relationship with us, we cannot be certain that they will prioritize or devote adequate resources to selling our products. Moreover, divergence in strategy or contract defaults by any of these channel partners may materially adversely affect our ability to develop, market, sell, or support our offerings.

Although we believe that direct sales will continue to account for a majority of product licenses revenues, we seek to maintain a significant level of sales activities through our channel partners. There can be no assurance that our channel partners will continue to cooperate with us. In addition, actions taken or not taken by such parties may materially adversely affect us. Our ability to achieve revenue growth in the future will depend in part on our ability to maintain successful relationships with our channel partners. If we are unable to maintain our relationships with these channel partners, our business, results of operations, and financial condition could be materially adversely affected.

In addition, we rely on our channel partners to operate in accordance with the terms of their contractual agreements with us. For example, some of our agreements with our channel partners prescribe the terms and conditions pursuant to which they are authorized to resell or distribute our software and offer technical support and related services. We also typically require our channel partners to represent to us the details of product licenses transactions sold to end user customers. If our channel partners do not comply with their contractual obligations to us, our business, results of operations, and financial condition may be materially adversely affected.

Our recognition of deferred revenue and advance payments is subject to future performance obligations and may not be representative of revenues for succeeding periods

Our gross current and non-current deferred revenue and advance payments totaled $221.0 million as of December 31, 2016. We offset our accounts receivable and deferred revenue for any unpaid items, which totaled $101.5 million, resulting in net current and non-current deferred revenue and advance payments of $119.5 million as of December 31, 2016. The timing and ultimate recognition of our deferred revenue and advance payments depend on various factors, including our performance of various service obligations.

Because of the possibility of customer changes or delays in customer development or implementation schedules or budgets, and the need for us to satisfactorily perform product support and other services, deferred revenue and advance payments at any particular date may not be representative of actual revenue for any succeeding period.

Our international operations are complex and expose us to risks that could have a material adverse effect on our business, operating results, and financial condition

We receive a significant portion of our total revenues from international sales, and conduct our business activities in various foreign countries, including some emerging markets where we have limited experience, where the challenges of conducting our business can be significantly different from those we have faced in more developed markets, and where business practices may create internal control risks. International revenues accounted for 39.3%, 38.3%, and 41.1% of our total revenues for the years ended December 31, 2016, 2015, and 2014, respectively. Our international operations require significant management attention and financial resources.

There are certain risks inherent in our international business activities, including:

- fluctuations in foreign currency exchange rates;
- new, or changes in, regulatory requirements;

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- tariffs, export and import restrictions, restrictions on foreign investments, sanctions, and other trade barriers or protection measures;
- costs of localizing offerings;
- lack of acceptance of localized offerings;
- difficulties in and costs of staffing, managing, and operating our international operations;
- tax issues, including restrictions on repatriating earnings;
- weaker intellectual property protection;
- economic weakness or currency related crises;
- the burden of complying with a wide variety of laws, including those relating to labor matters, consumer and data protection, privacy, network security, and encryption;
- generally longer payment cycles and greater difficulty in collecting accounts receivable;
- our ability to adapt to sales practices and customer requirements in different cultures;
- corporate espionage; and
- political instability and security risks in the countries where we are doing business.

We may face heightened risks in connection with our international operations as a result of the referendum vote held on June 23, 2016 in the United Kingdom, commonly referred to as "Brexit," which favored the United Kingdom leaving the European Union. The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations that resulted in a sharp decline in the value of the British pound, as compared to the U.S. dollar and other currencies. The future effects of Brexit are uncertain and will depend on any agreements the United Kingdom makes to retain access to E.U. markets either during a transitional period or more permanently. Brexit could, among other outcomes, disrupt the free movement of goods, services and people between the United Kingdom and the European Union, and significantly disrupt trade between the United Kingdom and the European Union. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations, including tax laws and regulations, as the United Kingdom determines which E.U. laws to replace or replicate. Disruptions to trade, weakening of economic conditions, economic and legal uncertainties, or changes in currency rates may adversely affect our business, financial condition, operating results and cash flows.

Various corporate tax reform bills and other proposals have been or are currently under consideration by Congress and the new Presidential administration. These proposals include, among other items, corporate income tax rate changes in varying, uncertain, or unspecified amounts, the reduction or elimination of certain corporate tax incentives, modifications to the existing regime for taxing overseas earnings (including consideration of a minimum tax on adjusted unrepatriated foreign earnings and a cash flow tax with border adjustments that could treat imports less favorably than exports), and measures to prevent base erosion and profit shifting. It is not clear whether, or to what extent, these proposals may be enacted. Although the overall impact that such proposals may have on our future effective tax rate is unclear at this time, significant changes to the U.S. taxation of our international income could have a material adverse effect on our results of operations.

From time to time, we may undertake various potential intercompany transactions and legal entity restructurings that involve our international subsidiaries. We consider various factors in evaluating these potential transactions and restructurings, including the alignment of our corporate structure with our organizational objectives, the operational and tax efficiency of our corporate structure, and the long-term cash flows and cash needs of our business. Such transactions and restructurings could negatively impact our overall tax rate and result in additional tax liabilities.

In addition, compliance with foreign and U.S. laws and regulations that are applicable to our international operations is complex and may increase our cost of doing business in international jurisdictions, and our international operations could expose us to fines and penalties if we fail to comply with these regulations. These laws and regulations include anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and local laws prohibiting corrupt payments to governmental officials. These laws and regulations also include import

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and export requirements and economic and trade sanctions administered by the Office of Foreign Assets Control and the U.S. Commerce Department based on U.S. foreign policy and national security goals against targeted foreign states, organizations, and individuals. Although we have implemented policies and procedures designed to help ensure compliance with these laws, there can be no assurance that our employees, partners, and other persons with whom we do business will not take actions in violation of our policies or these laws. Any violations of these laws could subject us to civil or criminal penalties, including substantial fines or prohibitions on our ability to offer our products and services to one or more countries, and could also materially damage our reputation and our brand.

These factors may have a material adverse effect on our future sales and, consequently, on our business, operating results, and financial condition.

We may lose sales, or sales may be delayed, due to the long sales and implementation cycles of certain of our products and services, which could reduce our revenues

To date, our customers have typically invested substantial time, money, and other resources and involved many people in the decision to license our software products and purchase our related services. As a result, we may wait nine months or more after the first contact with a customer for that customer to place an order while it seeks internal approval for the purchase of our products or services. During this long sales cycle, events may occur that affect the size and/or timing of the order or even cause it to be canceled. For example, our competitors may introduce new offerings, or the customer's own budget and purchasing priorities may change.

Even after an order is placed, the time it takes to deploy our products and complete services engagements can vary widely. Implementing some of our offerings can take several months, depending on the customer's needs, and may begin only with a pilot program. It may be difficult to deploy our products if the customer has complicated deployment requirements, which typically involve integrating databases, hardware, and software from different vendors. If a customer hires a third party to deploy our products, we cannot be sure that our products will be deployed successfully.

Our results in any particular period may depend on the number and volume of large transactions in that period and these transactions may involve lengthier, more complex, and more unpredictable sales cycles than other transactions

As existing and potential customers seek to standardize on a single analytics vendor or require greater vendor capacity to meet their growing analytics needs, our business may experience larger transactions at the enterprise level and larger transactions may account for a greater proportion of our business. The presence or absence of one or more large transactions in a particular period may have a material positive or negative effect on our revenue and operating results for that period. For the years ended December 31, 2016, 2015, and 2014, our top three product licenses transactions with recognized revenue totaled $9.2 million, $7.4 million, and $6.4 million respectively, or 8.1%, 6.2%, and 5.1% of total product licenses revenues, respectively. These transactions represent significant business and financial decisions for our customers, require considerable effort on the part of customers to assess alternative products, and often require additional levels of management approval. In addition, large transactions are often more complex than smaller transactions. These factors generally lengthen the typical sales cycle and increase the risk that customers may postpone or delay purchasing decisions from one period to another subsequent or later period or that customers will alter their purchasing requirements. We may also encounter greater competition and pricing pressure in larger transactions and the sales effort and service delivery scope for larger transactions may require us to use additional resources to execute the transaction. These factors could result in lower than anticipated revenue and earnings for a particular period or in lower estimated revenue and earnings in future periods.

We face a variety of risks in doing business with U.S., foreign, state, and local governments and government agencies, including risks related to the procurement process, budget constraints and cycles, termination of contracts, and compliance with government contracting requirements

Our customers include the U.S. government and a number of state and local governments and government agencies. There are a variety of risks in doing business with government entities, including:

Procurement. Contracting with public sector customers is highly competitive and can be time-consuming and expensive, requiring us to incur significant up-front time and expense without any assurance that we will win a contract.

Budgetary Constraints and Cycles. Demand and payment for our products and services are impacted by public sector budgetary cycles and funding availability, with funding reductions or delays adversely impacting public sector demand for our products and services.

Termination of Contracts. Public sector customers often have contractual or other legal rights to terminate current contracts for convenience or due to a default. If a contract is terminated for convenience, which can occur if the customer's needs change, we may only be able to collect fees for products or services delivered prior to termination and settlement expenses. If a contract is terminated due to a default, we may not recover even those amounts, and we may be liable for excess costs incurred by the customer for procuring alternative products or services.

Compliance with Government Contracting Requirements. Government contractors are required to comply with a variety of complex laws, regulations, and contractual provisions relating to the formation, administration, or performance of government contracts that give public sector customers substantial rights and remedies, many of which are not typically found in commercial contracts. These may include rights with respect to price protection, the accuracy of information provided to the government, contractor compliance with socio-economic policies, and other terms that are particular to government contracts. Federal, state, and local governments and government agencies routinely investigate and audit contractors for compliance with these requirements. If, as a result of an audit or review, it is determined that we have failed to comply with these requirements, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, cost associated with the triggering of price reduction clauses, fines, and suspensions or debarment from future government business, and we may suffer harm to our reputation.

Our customers also include a number of foreign governments and government agencies. Similar procurement, budgetary, contract, and audit risks also apply to our doing business with these entities. In addition, compliance with complex regulations and contracting provisions in a variety of jurisdictions can be expensive and consume significant management resources. In certain jurisdictions, our ability to win business may be constrained by political and other factors unrelated to our competitive position in the market. Each of these difficulties could materially adversely affect our business and results of operations.

We depend on technology licensed to us by third parties, and the loss of this technology could impair our software, delay implementation of our offerings, or force us to pay higher license fees

We license third-party technologies that are incorporated into or utilized by our existing offerings. There can be no assurance that the licenses for such third-party technologies will not be terminated or that we will be able to license third-party software for future offerings. In addition, we may be unable to renegotiate acceptable third-party license terms, or we may be subject to infringement liability if third-party software that we license is found to infringe intellectual property rights of others. Changes in or the loss of third-party licenses could lead to a material increase in our costs, or to our software offerings becoming inoperable or their performance being materially reduced. As a result, we may need to incur additional development costs to help ensure continued performance of our offerings, and we may experience a decreased demand for our offerings.

If we are unable to recruit or retain skilled personnel, or if we lose the services of our Chairman of the Board of Directors, President & Chief Executive Officer, our business, operating results, and financial condition could be materially adversely affected

Our future success depends on our continuing ability to attract, train, assimilate, and retain highly skilled personnel. Competition for these employees is intense. We may not be able to retain our current key employees, or attract, train, assimilate, and retain other highly skilled personnel in the future. For example, our restructuring activities and cost-saving initiatives may adversely impact our ability to attract or retain key employees. Our future success also depends in large part on the continued service of Michael J. Saylor, our Chairman of the Board of Directors, President & Chief Executive Officer. If we lose the services of Mr. Saylor, or if we are unable to attract, train, assimilate, and retain the highly skilled personnel we need, our business, operating results, and financial condition could be materially adversely affected.

The emergence of new industry standards may materially adversely affect the demand for our existing offerings

The emergence of new industry standards in related fields may materially adversely affect the demand for our existing offerings. This could happen if new Web standards and technologies or new standards in the field of operating system support emerged that were incompatible with customer deployments of our software offerings. For example, if we are unable to adapt our software offerings on a timely basis to new standards in database access technology, the ability of our software offerings to access customer databases could be impaired.

The nature of our software offerings makes them particularly vulnerable to undetected errors, or bugs, which could cause problems with how the offerings perform and which could, in turn, reduce demand for our offerings, reduce our revenue, and lead to product liability claims against us

Software as complex as ours may contain errors and/or defects. Although we test our software offerings extensively, we have in the past discovered software errors in our offerings after their introduction. Despite testing by us and our current and potential customers, errors may be found in new offerings or releases after commercial shipments begin. This could result in lost revenue, damage to our reputation, or delays in market acceptance, which could have a material adverse effect on our business, operating results, and financial condition. We may also need to expend resources and capital to correct these defects.

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

Changes in laws or regulations relating to privacy or the collection, processing, disclosure, storage, or transmission of personal data, or any actual or perceived failure by us or our third-party service providers to comply with such laws and regulations or applicable privacy policies, could materially adversely affect our business

Aspects of our business, including our cloud services offerings and Usher, involve collecting, processing, disclosing, storing, and transmitting personal data, which is subject to certain privacy policies and certain federal, state, and foreign laws, regulations, and directives relating to privacy and data protection. The amount of customer and employee data that we store through our cloud services offerings, networks, and other systems, including personal data, is increasing. In addition, the types of data subject to protection as personal data in the European Union, the United States, and elsewhere have been expanding. In recent years, the collection and use of personal data by companies have come under increased regulatory and public scrutiny, especially in relation to the collection and processing of sensitive data, such as healthcare, financial services, and government data. For example, in the United States, protected health information is subject to the Health Insurance Portability and Accountability Act ("HIPAA"). HIPAA has been supplemented by the Health Information Technology for Economic and Clinical Health Act with the result of increased civil and criminal penalties for noncompliance. Entities performing certain functions that engage in creating, receiving, maintaining, or transmitting protected health information provided by covered entities and other business associates are directly subject to enforcement under HIPAA. Our access to protected health information through our cloud services offerings triggers obligations to comply with certain privacy rules and data security requirements under HIPAA.

Any systems failure or security breach that results in the release of, or unauthorized access to, personal data, or any failure or perceived failure by us or our third-party service providers to comply with applicable privacy policies or any applicable laws or regulations relating to privacy or data protection, could result in proceedings against us by domestic or foreign governmental entities or others. Such proceedings could result in the imposition of sanctions, fines, penalties, liabilities, and/or governmental orders requiring that we change our data practices, any of which could have a material adverse effect on our business, operating results, reputation, and financial condition.

Various federal, state, and foreign legislative, regulatory, or other governmental bodies may enact new or additional laws or regulations, or issue rulings that invalidate prior laws or regulations, concerning privacy, data storage, and data protection that could materially adversely impact our business. For example, in October 2015, the Court of Justice of the European Union issued a ruling that declared the U.S.-EU Safe Harbor Framework invalid. Following this ruling, U.S. and European authorities agreed to, and in July 2016 the European Commission formally adopted, a new mechanism for lawfully transferring personal data from the European Union to the United States, referred to as the "Privacy Shield." In addition, in April 2016, the European Parliament and the Council of the European Union formally adopted a comprehensive general data protection regulation, which will take effect in May 2018. Complying with these and other changing requirements could cause us or our customers to incur substantial costs, require us to change our business practices, or limit our ability to provide certain products and services in certain jurisdictions, any of which could materially adversely affect our business and operating results. In addition, the Privacy Shield, as well as other mechanisms for lawfully transferring personal data of European residents from the European Union to the United States and other countries are being challenged in European courts, which could lead to uncertainty about the legality of such transfers, or burdensome or inconsistent legal requirements. New laws or regulations restricting or limiting the collection or use of mobile data could also reduce demand for certain of our services or require changes to our business practices, which could materially adversely affect our business and operating results.

If we or our third-party service providers experience a security breach and unauthorized parties obtain access to our customers' or channel partners' data, our data, or our cloud services offerings, networks, or other systems, our offerings may be perceived as not being secure, our reputation may be harmed, demand for our offerings may be reduced, our operations may be disrupted, we may incur significant legal and financial liabilities, and our business could be materially adversely affected

As part of our business, we process, store, and transmit our customers' and channel partners' information and data as well as our own, including in our cloud services offerings, networks, and other systems. There can be no assurance that any security measures that we or our third-party service providers have implemented will be effective against all current or future security threats. For example, security measures may be breached as a result of technological error, computer viruses, or third-party action, including intentional misconduct by computer hackers, physical break-ins, the actions of state actors, industrial espionage, fraudulent inducement of employees, customers, or channel partners to disclose sensitive information such as user names or passwords, and employee, customer or channel partner error or malfeasance. High-profile security breaches at other companies have increased in recent years. A security breach could result in unauthorized access to or disclosure, modification, misuse, loss, or destruction of our customers' or channel partners' data, our data (including our proprietary information, intellectual property, or trade secrets), or our cloud services offerings, networks, or other systems. Because there are many different security breach techniques and such techniques continue to evolve, we may be unable to anticipate attempted security breaches and implement adequate preventative measures. Third parties may also conduct attacks designed to temporarily deny customers access to our services. Any security breach or successful denial of service attack could result in a loss of customer confidence in the security of our offerings and damage to our brand, reducing the demand for our offerings and our revenue, disrupt our normal business operations, require us to spend material resources to investigate or correct the breach, expose us to legal liabilities, including litigation, regulatory enforcement, and indemnity obligations, and materially adversely affect our operating results. These risks will increase as we continue to grow the number and scale of our cloud-based offerings, and process, store, and transmit increasingly large amounts of our customers', channel partners', and our own information and data, which may include proprietary or confidential data or personal or identifying information.

Our intellectual property is valuable, and any inability to protect it could reduce the value of our products, services, and brand

We rely on a combination of copyrights, patents, trademarks, trade secrets, confidentiality procedures, and contractual commitments to protect our intellectual property. Despite our efforts, these measures can only provide limited protection. Unauthorized third parties may try to copy or reverse engineer portions of our products or otherwise obtain and use our intellectual property. Any patents owned by us may be invalidated, circumvented, or challenged. Any of our pending or future patent applications, whether or not currently being challenged, may not be issued with the scope of the claims we seek, if at all. Moreover, recent amendments to and developing jurisprudence regarding U.S. patent law may affect our ability to protect our intellectual property and defend against claims of patent infringement. In addition, although we generally enter into confidentiality agreements with our employees, our former employees may seek employment with our business partners, customers, or competitors, and there can be no assurance that the confidential nature of our intellectual property will be maintained. Furthermore, the laws of some countries do not provide the same level of protection of our intellectual property as do the laws of the United States. If we cannot protect our intellectual property against unauthorized copying or use, we may not remain competitive.

Third parties may claim we infringe their intellectual property rights

We periodically receive notices from third parties claiming we are infringing their intellectual property rights, principally patent and trademark rights. We expect the number of such claims will increase as we continue to expand our offerings and branding, the number of offerings and level of competition in our industry segments grow, the functionality of offerings overlaps, and the volume of issued patents, patent applications, and trademark registrations continues to increase. Responding to any infringement claim, regardless of its validity, could:

- be time-consuming, costly, and/or result in litigation;
- divert management’s time and attention from developing our business;
- require us to pay monetary damages or enter into royalty and licensing agreements that we would not normally find acceptable;
- require us to stop selling certain of our offerings;
- require us to redesign certain of our offerings using alternative non-infringing technology or practices, which could require significant effort and expense;
- require us to rename certain of our offerings or entities; or
- require us to satisfy indemnification obligations to our customers and channel partners.

Additionally, while we monitor our use of third-party software, including open source software, we cannot assure you that our processes for controlling such use in our products will be effective. If we inadvertently embed certain types of open source software into one or more of our products, or if third-party software that we license is found to infringe intellectual property rights of others, we could subject ourselves to infringement liability and be required to re-engineer our products, discontinue the sale of our products if re-engineering could not be accomplished on a timely or cost-effective basis, or make available to certain third parties or generally available, in source code form, our proprietary code, any of which could materially adversely affect our business, operating results, and financial condition.

If a successful infringement claim is made against us and we fail to develop or license a substitute technology or brand name, as applicable, our business, results of operations, financial condition, or cash flows could be materially adversely affected.

For information regarding certain pending intellectual property litigation, see “Part I. Item 3. Legal Proceedings.”

Pending or future litigation could have a material adverse effect on our results of operation and financial condition

In addition to intellectual property litigation, from time to time, we have been subject to other litigation. Regardless of the merits of any claims that may be brought against us, pending or future litigation could result in a diversion of management's attention and resources and we may be required to incur significant expenses defending against these claims. If we are unable to prevail in litigation, we could incur substantial liabilities. Where we can make a reasonable estimate of the liability relating to pending litigation and determine that it is probable, we record a related liability. As additional information becomes available, we assess the potential liability and revise estimates as appropriate. However, because of uncertainties relating to litigation, the amount of our estimates could be wrong.

Because of the rights of our two classes of common stock and because we are controlled by Michael J. Saylor, who beneficially owns the majority of our class B common stock, Mr. Saylor could transfer control of MicroStrategy to a third party without the approval of our Board of Directors or our other stockholders, prevent a third party from acquiring us, or limit your ability to influence corporate matters

We have two classes of common stock: class A common stock and class B common stock. Holders of our class A common stock generally have the same rights as holders of our class B common stock, except that holders of class A common stock have one vote per share while holders of class B common stock have ten votes per share. As of January 30, 2017, holders of our class B common stock owned 2,035,184 shares of class B common stock, or 68.4% of the total voting power. As of January 30, 2017, Mr. Saylor, our Chairman of the Board of Directors, President & Chief Executive Officer, beneficially owned 2,011,668 shares of class B common stock, or 67.6% of the total voting power. Accordingly, Mr. Saylor can control MicroStrategy through his ability to determine the outcome of elections of our directors, amend our certificate of incorporation and by-laws, and take other actions requiring the vote or consent of stockholders, including mergers, going-private transactions, and other extraordinary transactions and their terms.

Our certificate of incorporation allows holders of class B common stock to transfer shares of class B common stock, subject to the approval of stockholders holding a majority of the outstanding class B common stock. Mr. Saylor or a group of stockholders holding a majority of the outstanding class B common stock could, without the approval of our Board of Directors or our other stockholders, transfer voting control of MicroStrategy to a third party. Such a transfer of control could have a material adverse effect on our business, operating results, and financial condition. Mr. Saylor or a group of stockholders holding a majority of the outstanding class B common stock could also prevent a change of control of MicroStrategy, regardless of whether holders of class A common stock might otherwise receive a premium for their shares over the then current market price. In addition, this concentrated control limits stockholders' ability to influence corporate matters and, as a result, we may take actions that our non-controlling stockholders do not view as beneficial or that conflict with their interests. As a result, the market price of our class A common stock could be materially adversely affected.

Our status as a "controlled company" could make our class A common stock less attractive to some investors or otherwise materially adversely affect our stock price

Because we qualify as a "controlled company" under the corporate governance rules for NASDAQ-listed companies, we are not required to have independent directors comprise a majority of our Board of Directors. Additionally, our Board of Directors is not required to have an independent compensation or nominating committee, or to have the independent directors exercise the nominating function. We are also not required to have the compensation of our executive officers be determined by a compensation committee of independent directors. In addition, we are not required to empower our Compensation Committee with the authority to engage the services of any compensation consultants, legal counsel, or other advisors, or to have the Compensation Committee assess the independence of compensation consultants, legal counsel, and other advisors that it engages.

In light of our status as a controlled company, our Board of Directors has determined not to establish an independent nominating committee or have its independent directors exercise the nominating function, and has elected instead to have the Board of Directors be directly responsible for nominating members of the Board. A majority of our Board of Directors is currently comprised of independent directors, and our Board of Directors has established a Compensation Committee comprised entirely of independent directors. The Compensation Committee determines

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the compensation of our Chief Executive Officer. However, our Board of Directors has authorized our Chief Executive Officer to determine the compensation of executive officers other than himself, rather than having such compensation determined by the Compensation Committee, except that certain executive officer compensation that is intended to qualify as performance-based compensation for purposes of Section 162(m) of the Internal Revenue Code is determined by the Compensation Committee pursuant to the requirements of Section 162(m). Awards under our 2013 Stock Incentive Plan (as amended, the “2013 Equity Plan”) are also approved by the Compensation Committee. Additionally, while our Compensation Committee is empowered with the authority to retain and terminate outside counsel, compensation consultants, and other experts or consultants, it is not required to assess their independence.

Although currently a majority of our Board of Directors is comprised of independent directors and the Compensation Committee is comprised entirely of independent directors, we may elect in the future not to have independent directors constitute a majority of the Board of Directors or the Compensation Committee, have our Chief Executive Officer’s compensation determined by a compensation committee of independent directors, or have a compensation committee of the Board of Directors at all.

Accordingly, should the interests of our controlling stockholder differ from those of other stockholders, the other stockholders may not have the same protections that are afforded to stockholders of companies that are required to follow all of the corporate governance rules for NASDAQ-listed companies. Our status as a controlled company could make our class A common stock less attractive to some investors or otherwise materially adversely affect our stock price.

Revenue recognition accounting pronouncements may materially adversely affect our reported results of operations

We continuously review our compliance with all new and existing revenue recognition accounting pronouncements. In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU 2014-09”), which supersedes nearly all existing revenue recognition guidance. See Note 3, Recent Accounting Standards, to the Consolidated Financial Statements in “Part IV. Item 15. Exhibits, Financial Statement Schedules” of this Annual Report on Form 10-K for further information regarding ASU 2014-09. We continue to evaluate the impact of this guidance on our consolidated financial position, results of operations, and cash flows. Depending on the outcome of these ongoing reviews and the potential issuance of further accounting pronouncements, implementation guidelines, and interpretations, we may be required to modify our reported results, revenue recognition policies, or business practices, which could materially adversely affect our results of operations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2016, we leased approximately 214,000 square feet of office space at a location in Northern Virginia that began serving as our corporate headquarters in October 2010. The corporate headquarters office lease includes tenant incentives and allowances that we may use for leasehold improvements. The term of the lease expires in December 2020.

In addition, we lease offices in U.S. and foreign locations for our services and support, sales and marketing, research and development, and administrative personnel. As of December 31, 2016, we leased approximately 34,000 square feet of office space in the United States, in addition to our corporate headquarters, and approximately 188,000 square feet of office space in various foreign locations.

Item 3. Legal Proceedings

In December 2011, DataTern, Inc. (“DataTern”) filed a complaint for patent infringement against the Company in the United States District Court for the District of Massachusetts (the “District Court”). The complaint alleged that the Company infringes U.S. Patent No. 6,101,502 (the “‘502 Patent”), allegedly owned by DataTern, by making, selling, or offering for sale several of the Company’s products and services including MicroStrategy 9™, MicroStrategy Intelligence Server™, MicroStrategy Business Intelligence Platform™, MicroStrategy Cloud Personal, and other MicroStrategy applications for creating or using data mining, dashboards, business analytics, data storage and warehousing, and Web hosting support. The complaint accused the Company of willful infringement and sought an unspecified amount of damages, an award of attorneys’ fees, and preliminary and permanent injunctive relief. In light of a judgment in a separate action involving DataTern in another jurisdiction, in February 2013, MicroStrategy and DataTern filed motions for summary judgment of non-infringement and the District Court entered summary judgment against DataTern. In March 2013, DataTern filed a notice of appeal with the United States Court of Appeals for the Federal Circuit (the “Federal Circuit”). In December 2014, the Federal Circuit issued an opinion vacating the District Court’s summary judgment, stating that the claim construction on which the summary judgment was based was incorrect. In January 2015, the case was remanded to the District Court for further proceedings. A claim construction ruling was issued in February 2017. We have received indemnification requests from certain of our channel partners and customers who were sued by DataTern in the District Court in lawsuits alleging infringement of the ‘502 Patent. The proceedings against these channel partners and customers have been stayed pending the resolution of DataTern’s lawsuit against the Company. The outcome of these matters is not presently determinable.

We are also involved in various other legal proceedings arising in the normal course of business. Although the outcomes of these other legal proceedings are inherently difficult to predict, we do not expect the resolution of these other legal proceedings to have a material adverse effect on our financial position, results of operations, 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

Our class A common stock is traded on the NASDAQ Global Select Market under the symbol "MSTR." The following table sets forth the high and low sales prices for the class A common stock for the periods indicated as reported by the NASDAQ Global Select Market:

	High	Low
Year ended December 31, 2016		
First Quarter	$182.30	$141.01
Second Quarter	195.99	165.02
Third Quarter	191.76	161.90
Fourth Quarter	207.28	162.72
Year ended December 31, 2015		
First Quarter	$182.62	$150.01
Second Quarter	197.89	165.91
Third Quarter	226.48	168.63
Fourth Quarter	209.77	164.19

There is no established public trading market for our class B common stock. As of January 30, 2017, there were approximately 1,529 stockholders of record of our class A common stock and three stockholders of record of our class B common stock.

Holders of our class A common stock generally have the same rights as holders of our class B common stock, except that holders of class A common stock have one vote per share while holders of class B common stock have ten votes per share.

We have never declared or paid any cash dividends on either our class A or class B common stock and have no current plans to declare or pay any such dividends.

Information regarding our equity compensation plans and the securities authorized for issuance thereunder is incorporated by reference in "Part III. Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

The following table provides information about our repurchases of equity securities that are registered by us pursuant to Section 12 of the Exchange Act during the periods indicated:

Period	(a) Total Number of	(b) Average Price Paid	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced	(d) Maximum Number (or Approximate Dollar Value) of Shares (or

	Shares (or Units) Purchased	per Share (or Unit) (1)	Plans or Programs (1)	Units) that May Yet Be Purchased Under the Plans or Programs (1)
October 1, 2016 – October 31, 2016	0	N/A	0	$ 454,708,615
November 1, 2016 – November 30, 2016	0	N/A	0	$ 454,708,615
December 1, 2016 – December 31, 2016	0	N/A	0	$ 454,708,615
Total:	0	N/A	0	$ 454,708,615

(1) On July 28, 2005, we announced that the Board of Directors authorized us to repurchase up to an aggregate of $300.0 million of our class A common stock from time to time on the open market (the “2005 Share Repurchase Program”). On April 29, 2008, the Board of Directors amended the 2005 Share Repurchase Program to increase the amount of class A common stock that we are authorized to repurchase from $300.0 million to $800.0 million and extended the term of the 2005 Share Repurchase Program to April 29, 2013. On

April 25, 2013, the Board of Directors extended the term of the 2005 Share Repurchase Program through April 29, 2018, although the program may be suspended or discontinued by us at any time. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. The 2005 Share Repurchase Program may be funded using our working capital, as well as proceeds from any other funding arrangements that we may enter into in the future. As of December 31, 2016, pursuant to the 2005 Share Repurchase Program, we had repurchased an aggregate of 3,826,947 shares of our class A common stock at an average price per share of $90.23 and an aggregate cost of $345.3 million. As of December 31, 2016, $454.7 million of our class A common stock remained available for repurchase pursuant to the 2005 Share Repurchase Program. The average price per share and aggregate cost amounts disclosed above include broker commissions.

Performance Graph

The following graph compares the cumulative total stockholder return on our class A common stock from December 30, 2011 (the last trading day before the beginning of our fifth preceding fiscal year) to December 30, 2016 (the last trading day of the fiscal year ended December 31, 2016) with the cumulative total return of (i) the Total Return Index for The NASDAQ Stock Market (U.S. Companies) (the “NASDAQ Composite Index”) and (ii) the NASDAQ Computer Index. The graph assumes the investment of $100.00 on December 30, 2011 in our class A common stock, the NASDAQ Composite Index, and the NASDAQ Computer Index, and assumes that any dividends are reinvested. Measurement points are December 30, 2011, December 31, 2012, December 31, 2013, December 31, 2014, December 31, 2015, and December 30, 2016.

	12/30/11	12/31/12	12/31/13	12/31/14	12/31/15	12/30/16
MicroStrategy Incorporated	$100.00	$86.21	$114.70	$149.93	$165.52	$182.24
NASDAQ Composite Index	$100.00	$117.45	$164.57	$188.84	$201.98	$219.89
NASDAQ Computer Index	$100.00	$113.97	$152.79	$185.94	$200.19	$228.29

Item 6. Selected Financial Data

The following selected consolidated financial data should be read in conjunction with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," the Consolidated Financial Statements and notes thereto, and other financial information appearing elsewhere in this Annual Report on Form 10-K.

We previously operated Angel.com, a provider of cloud-based Customer Experience Management solutions for Interactive Voice Response and contact centers. In 2013, we completed the sale of our equity interest in Angel.com and have classified the gain on sale and preceding operations of the Angel.com business as discontinued operations in the following selected consolidated financial data.

	Years Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share data)				
Statements of Operations Data					
Total revenues	$512,161	$529,869	$579,830	$575,888	$565,724
Income from continuing operations, net of tax	$90,908	$105,931	$5,035	$26,550	$22,473
Discontinued operations, net of tax	$0	$0	$0	$56,782	$(1,927)
Net income	$90,908	$105,931	$5,035	$83,332	$20,546
Earnings (loss) per share (1)(2):					
Basic, from continuing operations	$7.96	$9.33	$0.45	$2.35	$2.05
Basic, from discontinued operations	0.00	0.00	0.00	5.02	(0.18)
Basic earnings per share	$7.96	$9.33	$0.45	$7.37	$1.87
Diluted, from continuing operations	$7.89	$9.18	$0.44	$2.35	$2.01
Diluted, from discontinued operations	0.00	0.00	0.00	5.02	(0.17)
Diluted earnings per share	$7.89	$9.18	$0.44	$7.37	$1.84

	As of December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Balance Sheet Data					
Total assets, excluding held-for-sale	$768,319	$656,894	$558,797	$585,514	$467,367
Long-term liabilities, excluding deferred revenue, advance payments, and held-for-sale	$16,741	$19,960	$26,208	$32,699	$49,649
Total stockholders' equity	$552,177	$455,281	$324,471	$310,326	$200,311

(1) Basic and fully diluted earnings (loss) per share for class A and class B common stock are the same.
(2) We have never declared or paid any cash dividends on either class A or class B common stock.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
Forward-Looking Information

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Exchange Act. For this purpose, any statements contained herein that are not statements of historical fact, including without limitation, certain statements regarding industry prospects and our results of operations or financial position, may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," and similar expressions are intended to identify forward-looking statements. The important factors discussed under "Item 1A. Risk Factors," among others, could cause actual results to differ materially from those indicated by forward-looking statements made herein and presented elsewhere by management from time to time. Such forward-looking statements represent management's current expectations and are inherently uncertain. Investors are warned that actual results may differ from management's expectations.

Overview

MicroStrategy is a leading worldwide provider of enterprise software platforms. Our mission is to provide enterprise customers with a world-class software platform and expert services so they can deploy unique intelligence applications.

MicroStrategy 10 consolidates analytics and mobility in a single unified platform, available both as on-premise software and as a hosted service offering in MicroStrategy Cloud. Our enterprise platform combines traditional business intelligence functionality with data discovery, mobile analytics, and powerful identity intelligence generated by digital credentials. MicroStrategy 10 builds on proven enterprise capabilities to make sophisticated, high-performance analytics more accessible, easier to use, and faster. MicroStrategy 10 consists of MicroStrategy Analytics, MicroStrategy Mobile, and Usher.

MicroStrategy Analytics empowers large organizations to analyze vast amounts of data and securely distribute actionable business insight throughout an enterprise, while also being able to cater to smaller workgroups and departmental use via MicroStrategy Desktop. MicroStrategy Analytics delivers reports and dashboards, and enables users to conduct ad hoc analysis and share insights anywhere, anytime, via mobile devices (via MicroStrategy Mobile) or the Web (via MicroStrategy Web). It also combines the agility and productivity of self-service visual data discovery with the security, scalability, and governance features of enterprise-grade business intelligence. MicroStrategy Analytics is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

MicroStrategy Web is the primary interface for analysts, data scientists, consumers and developers, offering interactive reporting, dashboarding, and ad-hoc data discovery capabilities through a Web browser. With MicroStrategy Web, a user can design and deliver dashboards across various styles of business intelligence, including scorecards, pixel-perfect documents and invoices, and interactive reports and statements, as well as for visual data discovery. MicroStrategy Web can also connect to a variety of data sources, and be used to build sophisticated advanced analytical models that may be inserted within dashboards and reports. MicroStrategy reports and dashboards can be personalized and automatically delivered to thousands of users with MicroStrategy Server's advanced distribution capabilities. Web applications can also be extensively customized and embedded into other applications using Web SDK for a branded experience.

MicroStrategy Desktop is a free, standalone, on-premise, single-user tool for fast, powerful, and easy-to-use self-service visual data discovery. It enables business users to analyze and gain valuable insight and understanding into their organizations' data by quickly creating stunning, useful visualizations and dashboards, without assistance from the IT department. MicroStrategy Desktop can be readily downloaded and installed on a PC or Mac, making the power of MicroStrategy 10 easily available. MicroStrategy Desktop can be used while offline and while not connected to MicroStrategy Server, and can connect to the MicroStrategy Server when needed.

MicroStrategy Mobile is fully integrated into the MicroStrategy Analytics platform, so it is easy to leverage existing visualizations, reports and dashboards to instantly deploy mobile business intelligence. In addition, MicroStrategy Mobile extends beyond analytics to enable organizations to rapidly build custom mobile applications that deliver analytics combined with transactions, multimedia and mapping to support business workflows. The robust code-free application development platform is designed to reduce development costs and accelerate the deployment of native mobile business apps optimized for both iOS and Android. Companies can build fully native iOS and Android apps that take advantage of the unique device and operating system capabilities (e.g., GPS/location, calendar, and camera) on those devices. MicroStrategy Mobile is an easy, fast, and cost-effective vehicle for mobilizing an organization's information systems, including its data warehouses, business intelligence, ERP, CRM, and Web applications that are currently accessible only on the desktop. With MicroStrategy Mobile, businesses can transform their entire workforce into a connected and more productive mobile workforce using information-driven mobile apps that are significantly more robust and secure than their Web-only counterparts. With mobile access to critical corporate data and systems that drive the business, employees can have a virtual office in their hands at all times. MicroStrategy Mobile is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

Usher is a digital credential and identity intelligence offering that provides a highly secure, convenient way for organizations to dematerialize traditional forms of identity verification (such as passwords, tokens, and physical badges) and replace them with a single mobile identity badge that is cryptographically linked to its owner's smartphone and dynamically linked to an enterprise's existing identity repositories. Usher can be used as a powerful enterprise productivity and workforce management resource because it is designed to enable managers to gain an almost real-time window into the location and activity of their distributed workforces, while providing powerful interactive features to manage or direct them. With the addition of Usher Professional, administrators can track user activity on a nearly real-time map using access telemetry. They can also engage in two-way communications with users from the Usher application. Usher works on standard smartphones running on iOS or the Android platform, and boasts an Apple Watch integration. Through the use of Bluetooth, QR codes, biometrics, push notifications, time-limited PIN codes, and other authentication methods, Usher users can log into applications, VPNs, and workstations, unlock doors and other physical gateways, and validate each other's identities. By delivering strong, multi-factor authentication that can be extended to nearly every corporate system, Usher's digital credential solution addresses some of the biggest challenges facing corporations today, including authentication, identity and access management, and resource authorization, while applying industry leading business intelligence and analytics to an enterprise's infrastructure. Usher is available both as on-premise software and as a hosted service offering in MicroStrategy Cloud.

MicroStrategy Cloud is a platform for organizations that want to harness the power of data through our enterprise solutions via the cloud. Compared to traditional on-premise approaches, MicroStrategy Cloud is architected to deliver best-of-breed MicroStrategy software via the cloud, with pre-configured, ready-to-go servers, coupled with the required supporting infrastructure with metadata databases, relational databases, and Big Data storage. With MicroStrategy Cloud, customers can launch enterprise analytics environments within minutes and use the full MicroStrategy 10 offering on a subscription basis.

MicroStrategy Analytics, offered via the on-premise enterprise platform, MicroStrategy Mobile, and MicroStrategy Cloud, together with related product and support services, continue to generate the vast majority of our revenue. During 2016, 2015, and 2014, we did not generate significant revenues from Usher.

The following table sets forth certain operating highlights (in thousands) for the years ended December 31, 2016, 2015, and 2014:

	Years Ended December 31,		
	2016	2015	2014
Revenues			
Product licenses	$113,503	$119,143	$125,952
Subscription services	30,574	27,839	22,322
Total product licenses and subscription services	144,077	146,982	148,274
Product support	285,079	281,740	295,703
Other services	83,005	101,147	135,853
Total revenues	512,161	529,869	579,830
Cost of revenues			
Product licenses	8,573	8,118	6,957
Subscription services	12,765	13,051	17,560
Total product licenses and subscription services	21,338	21,169	24,517
Product support	15,001	12,748	14,241
Other services	56,808	67,191	96,452
Total cost of revenues	93,147	101,108	135,210
Gross profit	419,014	428,761	444,620
Operating expenses			
Sales and marketing	158,740	148,522	225,086
Research and development	73,142	65,206	103,355
General and administrative	79,462	80,732	96,343
Restructuring costs	45	279	14,732
Total operating expenses	311,389	294,739	439,516
Income from operations	$107,625	$134,022	$5,104

The analytics market is highly competitive and our results of operations depend on our ability to market and sell offerings that provide customers with greater value than those offered by our competitors. Our success depends on the effectiveness with which we can differentiate our products from both large software vendors that provide products across multiple lines of business, including one or more products that directly compete with our products, and other analytics vendors across large, mid-sized, and small opportunities.

Organizations recently have sought, and we expect may continue to seek, to standardize their various analytics applications around a single software platform. This trend presents both opportunities and challenges for our business. It offers us the opportunity to increase the size of transactions with new customers and to expand the size of our analytics installations with existing customers. On the other hand, it presents the challenge that we may not be able to penetrate accounts that a competitor has penetrated or in which a competitor is the incumbent analytics provider.

The market for mobile business apps is rapidly changing, highly competitive, and complex with many competitors and different offerings ranging from fully custom-coded applications to plug-and-play solutions. While organizations vary greatly in their approach to, and pace of adoption of, mobile solutions, they are increasingly accelerating the transition of their businesses onto mobile devices, such as tablets and smartphones. Over the next few years, we expect that organizations will continue to construct their information and systems to take advantage of the efficiencies and cost savings of mobile computing. Ultimately, we expect that the majority of routine business tasks and workflows will become available as mobile-optimized touch-enabled apps.

In addition, there is increased market demand for analysis of a wider variety of data sources, including sensor data, social data, Web log data, and other data types. These new data sources are driving massive increases in the volume of data that can potentially be analyzed (“Big Data”), which in turn is accelerating development of new storage technologies like Hadoop and NoSQL databases. The demand for analytics on Big Data represents an opportunity for us, as it opens up new potential applications and use cases for our technology. It also creates a challenge as we will need to continually enhance our technology to support emerging data sources, deliver faster performance necessary to support analysis against large scale data sets, and support analysis of a wider variety of data types, such as unstructured, semi-structured, and streaming data.

We have undertaken multiple initiatives to address these opportunities and challenges, including:

- release of MicroStrategy 10, which consolidates analytics and mobility in a single unified platform;
- making our MicroStrategy Desktop product freely available to new and existing users, which helps to increase the penetration of the product into existing and prospective accounts, increase public awareness, and generate upsell opportunities for us by seeding the need for bigger enterprise capabilities like pixel-perfect dashboards, automated distribution, governance and security, all of which are available with our enterprise platform;
- making our free MicroStrategy Desktop product available to existing MicroStrategy Web users, who can seamlessly connect MicroStrategy Desktop to their existing projects, download dashboards from the server to MicroStrategy Desktop, work locally or offline, and use more capabilities and features, including data discovery and data wrangling;
- improved access to MicroStrategy 10 via easy-to-access trial and evaluation versions of products on our Website;
- easy connection to over 80 different data sources and certifications to the latest gateways to help ensure improved access to data in various formats;
- improved access to MicroStrategy Analytics through MicroStrategy Cloud, optimally configured to be scalable and elastic, ready to grow with an enterprise's cloud applications, and built to scale to meet usage spikes from a user's analytics and mobile apps;
- enhancement of our ability to support new enterprise-scale requirements for analytics, where we are currently a technology leader, with a focus on supporting more varied database platforms, providing higher performance and reliability with features like work and user fencing, and providing greater ability to manage and administer large-scale analytics projects;
- extension of our technology to provide greater support for the latest trend in self-service analytics, which is often referred to as "governed data discovery" or "agile analytics," by adding new user workflows, new visualizations, new exploration features, and new self-service capabilities for the preparation of data;
- enhancement of our mobile application platform for creating and deploying analytics applications to the expanding community of mobile device users; and
- maintenance of a dedicated performance engineering team and conducting research and development focused on providing our customers with the highest levels of performance for analytics applications of all sizes and for security solutions.

As discussed in Note 12, Share-based Compensation, to the Consolidated Financial Statements, we have outstanding stock options to purchase shares of our class A common stock under the 2013 Equity Plan. Share-based compensation expense (in thousands) from these stock option awards was recognized in the following operating expense line items in our Consolidated Statements of Operations for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
Sales and marketing	$2,971	$2,842	$335
Research and development	1,000	1,112	967
General and administrative	7,846	13,345	10,484
Total share-based compensation expense	$11,817	$17,299	$11,786

As of December 31, 2016, we estimated that approximately $25.7 million of additional share-based compensation expense for options granted under the 2013 Equity Plan will be recognized over a remaining weighted average period of 2.0 years.

We base our internal operating expense forecasts on expected revenue trends and strategic objectives. Many of our expenses, such as office leases and certain personnel costs, are relatively fixed. Accordingly, any shortfall in revenue may cause significant variation in our operating results. We therefore believe that quarter-to-quarter comparisons of our operating results may not be a good indication of our future performance.

Non-GAAP Financial Measures

We are providing a supplemental financial measure for income from operations that excludes the impact of our share-based compensation arrangements and restructuring activities. This financial measure is not a measurement of financial performance under generally accepted accounting principles in the United States ("GAAP") and, as a result, this financial measure may not be comparable to similarly titled measures of other companies. Management uses this non-GAAP financial measure internally to help understand, manage, and evaluate our business performance and to help make operating decisions. We believe that this non-GAAP financial measure is also useful to investors and analysts in comparing our performance across reporting periods on a consistent basis because it excludes a significant non-cash expense that we believe is not reflective of our general business performance and restructuring charges that we believe are not reflective of ongoing operating results. In addition, accounting for share-based compensation arrangements requires significant management judgment and the resulting expense could vary significantly in comparison to other companies. Therefore, we believe the use of this non-GAAP financial measure can also facilitate comparison of our operating results to those of our competitors.

Non-GAAP financial measures are subject to material limitations as they are not in accordance with, or a substitute for, measurements prepared in accordance with GAAP. For example, we expect that share-based compensation expense, which is excluded from our non-GAAP financial measure, will continue to be a significant recurring expense over the coming years and is an important part of the compensation provided to certain employees, officers, and directors. Our non-GAAP financial measure is not meant to be considered in isolation and should be read only in conjunction with our Consolidated Financial Statements, which have been prepared in accordance with GAAP. We rely primarily on such Consolidated Financial Statements to understand, manage, and evaluate our business performance, and use the non-GAAP financial measure only supplementally.

The following is a reconciliation of our non-GAAP financial measure to its most directly comparable GAAP measure (in thousands) for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
Reconciliation of non-GAAP income from operations:			
Income from operations	$107,625	$134,022	$5,104
Share-based compensation expense	11,817	17,299	11,786
Restructuring costs	45	279	14,732
Non-GAAP income from operations	$119,487	$151,600	$31,622

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based on our Consolidated Financial Statements, which have been prepared in accordance with GAAP.

The preparation of our Consolidated Financial Statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, and equity, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. These estimates, particularly estimates relating to revenue recognition, allowance for doubtful accounts, valuation of property and equipment, litigation and contingencies, valuation of net deferred tax assets, and share-based compensation, have a material impact on our financial statements and are discussed in detail throughout our analysis of the results of operations below. In some cases, changes in accounting estimates are reasonably likely to occur from period to period.

In addition to evaluating estimates relating to the items discussed above, we also consider other estimates and judgments, including, but not limited to, software development costs, provision for income taxes, and other contingent liabilities, including liabilities that we deem not probable of assertion. We base our estimates on historical experience and various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets, liabilities, and equity that are not readily apparent from other sources. Actual results and outcomes could differ from these estimates and assumptions.

We do not have any material ownership interest in any special purpose or other entities that are not wholly owned and/or consolidated into our Consolidated Financial Statements. Additionally, we do not have any material related party transactions.

Revenue Recognition. We recognize revenue from sales of software licenses to end users upon:

1) persuasive evidence of an arrangement, as provided by agreements, contracts, purchase orders or other arrangements, generally executed by both parties;
2) existence of a fixed or determinable fee;
3) delivery of the software; and
4) determination that collection is reasonably assured.

When the fees for software upgrades and enhancements, technical support, consulting, and education are bundled with the license fee, they are unbundled for revenue recognition purposes using vendor specific objective evidence (“VSOE”) of fair value of the elements.

Product support or post-contract support (“PCS”) revenue is derived from providing technical software support and software updates and upgrades to customers. PCS revenue is recognized ratably over the term of the contract, which in most cases is one year. Our VSOE for PCS, which includes updates, upgrades, and enhancements, is determined based on the optional stated renewal fee for PCS in the contract, which is the price the customer is required to pay when PCS is renewed. Additionally, the optional stated renewal fee used to establish VSOE for PCS in a software transaction must be above our minimum substantive VSOE rate for PCS. If a stated renewal rate is considered non-substantive, VSOE of PCS has not been established, and we recognize all revenue under the arrangement ratably over the PCS period. A minimum substantive VSOE rate is determined based on an analysis of historical sales of PCS. For a renewal rate to be non-substantive, we believe it must be significantly lower than our minimum VSOE rate. We consider a 10% variance below our minimum VSOE rate to be significant. It is rare for us to have an arrangement that includes a renewal rate that is below the minimum VSOE rate.

Revenue from consulting, education, and subscription services is recognized as the services are performed. Our VSOE for services other than PCS is determined based on an analysis of our historical sales of each element when sold separately from software.

For new offerings of services other than PCS or service offerings that have not had a sufficient history of sales activity, we initially establish VSOE based on the list price as determined by management with the relevant authority. Each service offering has a single list price in each country where sold.

If VSOE exists for all undelivered elements and there is no such evidence of fair value established for delivered elements, the arrangement fee is first allocated to the elements where evidence of fair value has been established and the residual amount is allocated to the delivered elements. If evidence of fair value for any undelivered element of an arrangement does not exist, all revenue from the arrangement is deferred until such time that evidence of fair value exists for undelivered elements or until all elements of the arrangement are delivered, subject to certain limited exceptions.

If an arrangement includes acceptance criteria, revenue is not recognized until we can objectively demonstrate that the software or service can meet the acceptance criteria or the acceptance period lapses, whichever occurs earlier. If a software license arrangement obligates us to deliver specified future products or upgrades, revenue is recognized when the specified future product or upgrades are delivered or when the obligation to deliver specified future products expires, whichever occurs earlier. If a software license arrangement obligates us to deliver unspecified future products, then revenue is recognized on a subscription basis, ratably over the term of the contract.

License revenue derived from sales to resellers or OEMs who purchase our products for resale is recognized upon sufficient evidence that the products have been sold to the end user, provided all other revenue recognition criteria have been met. Our standard software license and reseller agreements do not include any return rights other than the right to return non-conforming products for repair or replacement under our standard product warranties. During the last three fiscal years, we have not experienced any product returns related to warranty claims.

We generally offer either commercial discounts or referral fees to our channel partners, depending on the nature of services performed. Revenue recognized from transactions with channel partners involved in resale or distribution activities is recorded net of any commercial discounts provided to them. Referral fees paid to channel partners not involved in resale or distribution activities are expensed as cost of revenues and, during the last three fiscal years, were not significant.

Our standard software license agreements do not include any price protection provisions. However, transactions under our General Services Administration Federal Supply Schedule contract must comply with the Price Reductions clause. In addition, certain government agencies have the right to cancel contracts for “convenience.” During the last three fiscal years, there were no material amounts refunded under the Price Reductions clause and there were no material contracts cancelled for convenience.

Amounts collected prior to satisfying our revenue recognition criteria are included in net deferred revenue and advance payments in the accompanying Consolidated Balance Sheets.

Software revenue recognition requires judgment, including determinations about whether collectability is reasonably assured, the fee is fixed and determinable, a software arrangement includes multiple elements, and if so, whether VSOE exists for those elements. Judgment is also required to assess whether future releases of certain software represent new products or upgrades and enhancements to existing products.

We also generate subscription services revenues primarily from our cloud services offerings. Subscription services revenues include subscription fees from customers for access to the full breadth of MicroStrategy Analytics and MicroStrategy Mobile capabilities, database services, and data integration services. Our standard arrangements with customers generally do not provide the customer with the right to take possession of the software supporting the cloud-based application service at any time. As such, these arrangements are considered service contracts and revenue is recognized ratably over the service period of the contract, following completion of the set-up service. Any related set-up service fees are recognized ratably over the longer of the contract period or the estimated average life of the customer relationship.

Our subscription services are generally offered as standalone arrangements or as part of arrangements that include professional services. If deliverables in a multiple-element arrangement have standalone value upon delivery, we account for each such deliverable separately. We have concluded that our subscription services and our professional services each have standalone value. When we enter into multiple-element arrangements that include subscription services and professional services, the total arrangement consideration is allocated to each of the deliverables based on the relative selling price hierarchy. We determine the relative selling price for each deliverable using VSOE of selling price, if available, or our best estimate of selling price (“BESP”), if VSOE is not available. We have determined that third-party evidence of selling price (“TPE”) is not a practical alternative due to differences in our services offerings as compared to other companies and the lack of availability of third-party pricing information. For professional services, we have established VSOE because a consistent number of standalone sales of this deliverable have been priced within a reasonably narrow range. For subscription services, we have not established VSOE because, among other factors, the offering is relatively new and our pricing model continues to evolve. Accordingly, we use BESP to determine the relative selling price of our subscription services.

We determine BESP by reviewing historical transactions and by considering the service's pricing models and objectives that take into account factors such as gross margin, the size and volume of the transactions, perceived pricing sensitivity, and growth strategies. The determination of BESP is made through consultation with, and approval by, our management team, taking into consideration our go-to-market strategy. As our pricing and go-to-market strategies evolve, we may modify our pricing practices in the future, which could result in changes to the determination of VSOE and BESP.

Amounts, upon invoicing, are recorded in accounts receivable and either gross deferred revenue or revenue, depending on whether the applicable revenue recognition criteria have been met.

During 2016, 2015, and 2014, we did not generate significant revenues from Usher.

Allowance for Doubtful Accounts. We have established an allowance for doubtful accounts, which represents our best estimate of probable losses inherent in the accounts receivable balances. We evaluate specific accounts when we become aware that a customer may not be able to meet its financial obligations due to deterioration of its liquidity or financial viability, credit ratings, or bankruptcy. In addition, we periodically adjust this allowance based on management's review and assessment of the aging of receivables. While actual credit losses have historically been within management's expectations and the provisions established, we cannot guarantee that we will continue to experience the same credit loss rates we have in the past. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

Property and Equipment. Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, as follows: three years for computer equipment and purchased software; five years for office equipment and automobiles; and ten years for office furniture and our corporate aircraft, which has an estimated salvage value of 70%. Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the improvements or the term of the lease, whichever is shorter. We periodically evaluate the appropriateness of the estimated useful lives and salvage value of all property and equipment. Any change in the estimated useful life or salvage value is treated as a change in estimate and accounted for prospectively in the period of change.

Expenditures for maintenance and repairs are charged to expense as incurred, except for certain costs related to the aircraft. The costs of normal, recurring, or periodic repairs and maintenance activities related to the aircraft are expensed as incurred. The cost of planned major maintenance activities ("PMMA") may be treated differently because those activities may involve the acquisition of additional aircraft components or the replacement of existing aircraft components. PMMA are performed periodically based on passage of time and the use of the aircraft. The classification of a maintenance activity as part of PMMA requires judgment and can affect the amount of expense we recognize in any particular period. The cost of each PMMA is expected to be capitalized and amortized over the period until the next scheduled PMMA.

When assets are retired or sold, the capitalized cost and related accumulated depreciation are removed from the property and equipment accounts and any resulting gain or loss is recognized in the results of operations.

Eligible internal-use software development costs are capitalized subsequent to the completion of the preliminary project stage. Such costs include external direct material and service costs, employee payroll, and payroll-related costs. After all substantial testing and deployment is completed and the software is ready for its intended use, capitalization ceases and internal-use software development costs are amortized using the straight-line method over the estimated useful life of the software, generally three years.

We review long-lived assets, including intangible assets, for impairment annually or whenever events or changes in business circumstances indicate that the carrying value of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Each impairment test is based on a comparison of the undiscounted cash flows to the recorded value of the asset. If an asset is impaired, the asset is written down by the amount by which the carrying value of the asset exceeds the related fair value of the asset.

Litigation and Contingencies. We are subject to various loss contingencies arising in the ordinary course of business. We consider the likelihood of loss or impairment of an asset or the incurrence of a liability, as well as our ability to reasonably estimate the amount of loss in determining loss contingencies. An estimated loss contingency is accrued when it is probable that an asset has been impaired or a liability has been incurred and the amount of loss can be reasonably estimated. We regularly evaluate current information available to us to determine whether such accruals should be adjusted.

We have contingent liabilities that, in management's judgment, are not probable of assertion. If such unasserted contingent liabilities were to be asserted, or become probable of assertion, we may be required to record significant expenses and liabilities in the period in which these liabilities are asserted or become probable of assertion.

Income Taxes. In determining our net deferred tax assets and valuation allowances, management is required to make judgments and estimates related to projections of domestic and foreign profitability, the timing and extent of the utilization of net operating loss ("NOL") carryforwards, changes in applicable tax laws, transfer pricing methods, and prudent and feasible tax planning strategies. However, judgments and estimates related to our projections and assumptions are inherently uncertain; therefore, actual results could differ materially from our projections, which could impact the carrying value of our net deferred tax assets in future periods.

As a global company with subsidiaries in many countries, we are required to calculate and provide for estimated income tax liabilities for each of the tax jurisdictions in which we operate. This process involves estimating current tax liabilities and exposures in each jurisdiction as well as making judgments regarding the future recoverability of deferred tax assets. Changes in the estimated level of annual pre-tax income, changes in tax laws related to the utilization of NOLs in various jurisdictions, changes in tax rates, and changes resulting from tax audits can all affect the overall effective income tax rate which, in turn, impacts the overall level of income tax expense and net income. We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. We consider past and future taxable income and ongoing tax planning strategies in assessing the need for a valuation allowance. If we determine that we would not be able to realize all or part of the net deferred tax assets in the future, an adjustment to deferred tax assets would reduce income in the period that such determination was made.

Share-based Compensation. We recognize share-based compensation expense associated with stock option awards on a straight-line basis over the award's requisite service period. The share-based compensation expense is based on the fair value of such awards on the date of grant, as estimated using the Black-Scholes option pricing model. See Note 12, Share-based Compensation, to the Consolidated Financial Statements for further information regarding the assumptions used in the Black-Scholes option pricing model. These assumptions are based on management's best judgment, and changes to these assumptions could materially affect the fair value estimates and amount of share-based compensation expense recognized.

Impact of Foreign Currency Exchange Rate Fluctuations on Results of Operations

We conduct a significant portion of our business in currencies other than the U.S. dollar, the currency in which we report our Consolidated Financial Statements. As currency rates change from quarter over quarter and year over year, our results of operations may be impacted. The table below summarizes the impact (in thousands) of fluctuations in foreign currency exchange rates on certain components of our Consolidated Statements of Operations by showing the increase (decrease) in revenues or expenses, as applicable, from the prior year. The term "international" refers to operations outside of the United States and Canada.

	Years Ended December 31,		
	2016	2015	2014
International product licenses revenues	$(1,588)	$(8,008)	$(1,985)
International subscription services revenues	(325)	(408)	67

International product support revenues	(4,513)	(19,606)	(2,782)
International other services revenues	(1,113)	(7,357)	(1,078)
Cost of product support revenues	(327)	(543)	27
Cost of other services revenues	(950)	(6,420)	(665)
Sales and marketing expenses	(2,021)	(9,817)	(1,583)
Research and development expenses	(944)	(218)	278
General and administrative expenses	(1,396)	(2,458)	(536)

For example, if there had been no change to foreign currency exchange rates from 2015 to 2016, international product licenses revenues would have been $45.8 million rather than $44.2 million for the year ended December 31, 2016. If there had been no change to foreign currency exchange rates from 2015 to 2016, international product support revenues would have been $116.9 million rather than $112.4 million for the year ended December 31, 2016. If there had been no change to foreign currency exchange rates from 2015 to 2016, sales and marketing expenses would have been $160.8 million rather than $158.7 million for the year ended December 31, 2016.

Results of Operations

Comparison of the years ended December 31, 2016, 2015, and 2014

Revenues

Except as otherwise indicated herein, the term "domestic" refers to operations in the United States and Canada, and the term "international" refers to operations outside of the United States and Canada.

Product licenses and subscription services revenues. The following table sets forth product licenses and subscription services revenues (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change		% Change	
	2016	2015	2014	in 2016		in 2015	
Product Licenses and Subscription Services Revenues:							
Product Licenses							
Domestic	$69,307	$70,127	$68,836	-1.2	%	1.9	%
International	44,196	49,016	57,116	-9.8	%	-14.2	%
Total product licenses revenues	113,503	119,143	125,952	-4.7	%	-5.4	%
Subscription Services							
Domestic	26,359	24,332	19,454	8.3	%	25.1	%
International	4,215	3,507	2,868	20.2	%	22.3	%
Total subscription services revenues	30,574	27,839	22,322	9.8	%	24.7	%
Total product licenses and subscription services revenues	$144,077	$146,982	$148,274	-2.0	%	-0.9	%

The following table sets forth a summary, grouped by size, of the number of recognized product licenses transactions for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
Product Licenses Transactions with Recognized Licenses Revenue in the Applicable Period:			
More than $1.0 million in licenses revenue recognized	13	15	14
Between $0.5 million and $1.0 million in licenses revenue recognized	23	34	29
Total	36	49	43
Domestic:			
More than $1.0 million in licenses revenue recognized	10	12	11
Between $0.5 million and $1.0 million in licenses revenue recognized	14	17	15
Total	24	29	26
International:			
More than $1.0 million in licenses revenue recognized	3	3	3
Between $0.5 million and $1.0 million in licenses revenue recognized	9	17	14
Total	12	20	17

The following table sets forth the recognized revenue (in thousands) attributable to product licenses transactions, grouped by size, and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Product Licenses Revenue Recognized in the Applicable Period:					
More than $1.0 million in licenses revenue recognized	$22,963	$25,462	$21,335	-9.8 %	19.3 %
Between $0.5 million and $1.0 million in licenses revenue recognized	14,317	23,296	19,755	-38.5 %	17.9 %
Less than $0.5 million in licenses revenue recognized	76,223	70,385	84,862	8.3 %	-17.1 %
Total	113,503	119,143	125,952	-4.7 %	-5.4 %
Domestic:					
More than $1.0 million in licenses revenue recognized	19,314	20,350	16,231	-5.1 %	25.4 %
Between $0.5 million and $1.0 million in licenses revenue recognized	8,627	12,503	10,596	-31.0 %	18.0 %
Less than $0.5 million in licenses revenue recognized	41,366	37,274	42,009	11.0 %	-11.3 %

Total	69,307	70,127	68,836	-1.2	%	1.9	%
International:							
More than $1.0 million in licenses revenue recognized	3,649	5,112	5,104	-28.6	%	0.2	%
Between $0.5 million and $1.0 million in licenses revenue recognized	5,690	10,793	9,159	-47.3	%	17.8	%
Less than $0.5 million in licenses revenue recognized	34,857	33,111	42,853	5.3	%	-22.7	%
Total	$44,196	$49,016	$57,116	-9.8	%	-14.2	%

Product licenses revenues decreased $5.6 million and $6.8 million during 2016 and 2015, respectively, as compared to the prior year. For the years ended December 31, 2016, 2015, and 2014, product licenses transactions with more than $0.5 million in recognized revenue represented 32.8%, 40.9%, and 32.6%, respectively, of our product licenses revenues. During 2016, our top three product licenses transactions totaled $9.2 million in recognized revenue, or

8.1% of total product licenses revenues, compared to $7.4 million and $6.4 million, or 6.2% and 5.1% of total product licenses revenues, during 2015 and 2014, respectively.

Domestic product licenses revenues. Domestic product licenses revenues decreased $0.8 million during 2016, as compared to the prior year, primarily due to a decrease in the number and average deal size of transactions with recognized revenue between $0.5 million and $1.0 million, and a decrease in the number of transactions with more than $1.0 million in recognized revenue, partially offset by an increase in the number of transactions with less than $0.5 million in recognized revenue.

Domestic product licenses revenues increased $1.3 million during 2015, as compared to the prior year, primarily due to an increase in the number and average deal size of transactions with more than $1.0 million in recognized revenue, and an increase in the number and average deal size of transactions with recognized revenue between $0.5 million and $1.0 million, partially offset by a decrease in the number of transactions with less than $0.5 million in recognized revenue.

International product licenses revenues. International product licenses revenues decreased $4.8 million during 2016, as compared to the prior year, primarily due to a decrease in the number of transactions with recognized revenue between $0.5 million and $1.0 million and a $1.6 million unfavorable foreign currency exchange impact, partially offset by an increase in the number of transactions with less than $0.5 million in recognized revenue.

International product licenses revenues decreased $8.1 million during 2015, as compared to the prior year, primarily due to an $8.0 million unfavorable foreign currency exchange impact and a decrease in the number of transactions with less than $0.5 million in recognized revenue, partially offset by an increase in the number of transactions with recognized revenue between $0.5 million and $1.0 million.

Subscription services revenues. Subscription services revenues are primarily derived from our cloud services offerings that are recognized on a subscription basis over the service period of the contract. Subscription services revenues increased $2.7 million and $5.5 million during 2016 and 2015, respectively, as compared to the prior year, primarily due to new subscription services customers and an increase in the use of subscription services by existing customers.

Product support revenues. The following table sets forth product support revenues (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Product Support Revenues:					
Domestic	$172,695	$171,832	$171,505	0.5 %	0.2 %
International	112,384	109,908	124,198	2.3 %	-11.5 %
Total product support revenues	$285,079	$281,740	$295,703	1.2 %	-4.7 %

Product support revenues are derived from providing technical software support and software updates and upgrades to customers. Product support revenues are recognized ratably over the term of the contract, which is generally one year. Product support revenues increased $3.3 million during 2016, as compared to the prior year, primarily due to new product and premium support contracts, partially offset by a $4.5 million unfavorable foreign currency exchange impact. Product support revenues decreased $14.0 million during 2015, as compared to the prior year, primarily due to a $19.6 million unfavorable foreign currency exchange impact, partially offset by new product and premium support contracts.

Other services revenues. The following table sets forth other services revenues (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Other Services Revenues:					
Consulting					
Domestic	$35,935	$54,159	$73,180	-33.6 %	-26.0 %
International	37,465	37,906	48,778	-1.2 %	-22.3 %
Total consulting revenues	73,400	92,065	121,958	-20.3 %	-24.5 %
Education	9,605	9,082	13,895	5.8 %	-34.6 %
Total other services revenues	$83,005	$101,147	$135,853	-17.9 %	-25.5 %

Consulting revenues. Consulting revenues are derived from helping customers plan and execute the deployment of our software. Consulting revenues decreased $18.7 million during 2016, as compared to the prior year, primarily due to a decrease in billable hours worldwide and a $1.0 million unfavorable foreign currency exchange impact, partially offset by an increase in the average bill rate. Consulting revenues decreased $29.9 million during 2015, as compared to the prior year, primarily due to a decrease in billable hours worldwide and a $6.9 million unfavorable foreign currency exchange impact, partially offset by an increase in the average bill rate.

Education revenues. Education revenues are derived from the education and training that we provide to our customers to enhance their ability to fully utilize the features and functionality of our software. These offerings include self-tutorials, custom course development, joint training with customers' internal staff, and standard course offerings, with pricing dependent on the specific offering delivered. Education revenues increased $0.5 million during 2016, as compared to the prior year, primarily due to higher overall contract values and an increase in onsite and online course delivery. Education revenues decreased $4.8 million during 2015, as compared to the prior year, primarily due to lower overall contract values and a decrease in onsite and online course delivery.

Costs and Expenses

Cost of revenues. The following table sets forth cost of revenues (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Cost of Revenues:					
Product licenses and subscription services:					
Product licenses	$8,573	$8,118	$6,957	5.6 %	16.7 %
Subscription services	12,765	13,051	17,560	-2.2 %	-25.7 %
Total product licenses and subscription	21,338	21,169	24,517	0.8 %	-13.7 %

services							
Product support	15,001	12,748	14,241	17.7	%	-10.5	%
Other services:							
Consulting	50,866	63,344	90,780	-19.7	%	-30.2	%
Education	5,942	3,847	5,672	54.5	%	-32.2	%
Total other services	56,808	67,191	96,452	-15.5	%	-30.3	%
Total cost of revenues	$93,147	$101,108	$135,210	-7.9	%	-25.2	%

Cost of product licenses revenues. Cost of product licenses revenues consists of amortization of capitalized software development costs, referral fees paid to channel partners, the costs of product manuals and media, and royalties paid to third-party software vendors. Capitalized software development costs are generally amortized over a useful life of three years.

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Cost of product licenses revenues increased $0.5 million during 2016, as compared to the prior year, primarily due to a $2.5 million increase in amortization of capitalized software development costs related to MicroStrategy 10, which was made generally available in June 2015, and a $0.2 million increase in referral fees related to channel partners, partially offset by a $1.9 million decrease in amortization of capitalized software development costs related to MicroStrategy 9.3, which became fully amortized in September 2015, and a $0.5 million decrease in amortization of capitalized software development costs related to MicroStrategy 9.4, which became fully amortized in September 2016. We expect to amortize the remaining balance of our products' capitalized software development costs as of December 31, 2016 ratably over the applicable remaining amortization periods as follows:

	Capitalized Software Development Costs, Net, as of December 31, 2016 (in thousands)	Remaining Amortization Period (in months)
MicroStrategy 10	8,497	17
Total capitalized software development costs, net	$ 8,497	

Cost of product licenses revenues increased $1.2 million during 2015, as compared to the prior year, primarily due to a $3.5 million increase in amortization of capitalized software development costs related to MicroStrategy 10, which was made generally available in June 2015, partially offset by a $0.9 million decrease in referral fees related to channel partners, a $0.8 million decrease in amortization of capitalized software development costs related to MicroStrategy 9.3, which became fully amortized in September 2015, a $0.4 million decrease in amortization of capitalized software development costs related to MicroStrategy 9.2.1, which became fully amortized in June 2014, and a $0.3 million decrease in amortization of capitalized software development costs related to MicroStrategy 9.2, which became fully amortized in March 2014.

Cost of subscription services revenues. Cost of subscription services revenues consists of equipment, facility and other related support costs, and personnel and related overhead costs. Cost of subscription services revenues decreased $0.3 million during 2016, as compared to the prior year, primarily due to a $2.1 million decrease in equipment, facility, and other related support costs, a $0.3 million decrease in compensation and related costs due to a change in staffing composition, and a $0.3 million decrease in consulting and advisory costs, partially offset by a $2.3 million increase in third-party hosting service provider fees. Subscription services headcount increased 29.7% to 48 at December 31, 2016 from 37 at December 31, 2015.

Cost of subscription services revenues decreased $4.5 million during 2015, as compared to the prior year, primarily due to a $3.0 million decrease in equipment, facility, and other related support costs, which included a $1.5 million decrease related to certain reclassifications of depreciation costs to research and development expenses, a $1.1 million decrease in compensation and related costs due to a decrease in staffing levels, a $0.7 million decrease in consulting and advisory costs, and a $0.2 million decrease in recruiting costs, partially offset by a $0.4 million increase in third-party hosting service provider fees. Subscription services headcount decreased 35.1% to 37 at December 31, 2015 from 57 at December 31, 2014.

Cost of product support revenues. Cost of product support revenues consists of product support personnel and related overhead costs. Cost of product support revenues increased $2.3 million during 2016, as compared to the prior year, primarily due to a $1.8 million increase in compensation and related costs due to an increase in staffing levels, a $0.3 million increase in subcontractor costs, and a $0.2 million increase in recruiting costs. Product support headcount increased 30.5% to 171 at December 31, 2016 from 131 at December 31, 2015.

Cost of product support revenues decreased $1.5 million during 2015, as compared to the prior year, primarily due to a $1.5 million decrease in compensation and related costs due to a decrease in staffing levels. Product support headcount decreased 5.1% to 131 at December 31, 2015 from 138 at December 31, 2014.

Cost of consulting revenues. Cost of consulting revenues consists of personnel and related overhead costs. Cost of consulting revenues decreased $12.5 million during 2016, as compared to the prior year, primarily due to a $6.8 million decrease in compensation and related costs due to a decrease in average staffing levels, a $3.7 million decrease in subcontractor costs, a $1.4 million decrease in travel and entertainment expenditures, a $1.1 million decrease in facility and other related support costs, partially offset by a $0.4 million increase in recruiting costs.

Included in the above components is an aggregate $0.9 million favorable foreign currency exchange impact. Consulting headcount decreased 3.0% to 453 at December 31, 2016 from 467 at December 31, 2015.

Cost of consulting revenues decreased $27.4 million during 2015, as compared to the prior year, primarily due to a $13.1 million decrease in compensation and related costs due to a decrease in staffing levels, a $6.7 million decrease in subcontractor costs, a $5.0 million decrease in travel and entertainment expenditures, a $2.3 million decrease in facility and other related support costs, and a $0.3 million decrease in recruiting costs. Included in the above components is an aggregate $6.2 million favorable foreign currency exchange impact. Consulting headcount decreased 22.2% to 467 at December 31, 2015 from 600 at December 31, 2014.

Cost of education revenues. Cost of education revenues consists of personnel and related overhead costs. Cost of education revenues increased $2.1 million during 2016, as compared to the prior year, primarily due to a $0.9 million increase in compensation and related costs due to an increase in staffing levels, a $0.7 million increase in facility and other related support costs, and a $0.3 million increase in subcontractor costs. Education headcount increased 39.3% to 39 at December 31, 2016 from 28 at December 31, 2015.

Cost of education revenues decreased $1.8 million during 2015, as compared to the prior year, primarily due to a $0.7 million decrease in compensation and related costs due to a decrease in average staffing levels, a $0.5 million decrease in travel and entertainment expenditures, a $0.4 million decrease in subcontractor costs, and a $0.2 million decrease in facility and other related support costs. Education headcount increased 16.7% to 28 at December 31, 2015 from 24 at December 31, 2014.

Sales and marketing expenses. Sales and marketing expenses consist of personnel costs, commissions, office facilities, travel, advertising, public relations programs, and promotional events, such as trade shows, seminars, and technical conferences. The following table sets forth sales and marketing expenses (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change in 2016	% Change in 2015
	2016	2015	2014		
Sales and marketing expenses	$158,740	$148,522	$225,086	6.9 %	-34.0 %

Sales and marketing expenses increased $10.2 million during 2016, as compared to the prior year, primarily due to a $4.5 million increase in compensation and related costs due to an increase in staffing levels, a $1.8 million increase in marketing and advertising costs, a $1.0 million increase in recruiting costs, a $0.9 million increase in travel and entertainment expenditures, a $0.9 million increase in facility and other related support costs, a $0.7 million increase in consulting and advisory costs, and a $0.2 million increase in non-income taxes. Included in the above components is an aggregate $2.0 million favorable foreign currency exchange impact. Sales and marketing headcount increased 14.4% to 587 at December 31, 2016 from 513 at December 31, 2015.

As a result of the grant of stock options under the 2013 Equity Plan, we expect that share-based compensation expense, a portion of which is recognized as sales and marketing expense, will continue to be a significant recurring expense. As of December 31, 2016, we estimated that approximately $6.6 million of additional share-based compensation expense will be recognized as sales and marketing expense over a remaining weighted average period of 2.3 years. See “Overview” and Note 12, Share-based Compensation, to the Consolidated Financial Statements for further information regarding the 2013 Equity Plan and related share-based compensation expense.

Sales and marketing expenses decreased $76.6 million during 2015, as compared to the prior year, primarily due to a $51.5 million decrease in compensation and related costs due to a decrease in staffing levels, a $10.5 million decrease in marketing and advertising costs, a $7.9 million decrease in travel and entertainment expenditures, a $5.1 million decrease in facility and other related support costs, a $2.1 million decrease in recruiting costs, and a $1.5 million decrease in consulting and advisory costs, partially offset by a $2.5 million increase in share-based compensation expense related to the grant of stock options under the 2013 Equity Plan. Included in the above components is an aggregate $9.8 million favorable foreign currency exchange impact. Sales and marketing headcount decreased 22.5% to 513 at December 31, 2015 from 662 at December 31, 2014.

General and administrative expenses. General and administrative expenses consist of personnel and related overhead costs, and other costs of our executive, finance, human resources, information systems, and administrative departments, as well as third-party consulting, legal, and other professional fees. The following table sets forth general and administrative expenses (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
General and administrative expenses	$79,462	$80,732	$96,343	-1.6 %	-16.2 %

General and administrative expenses decreased $1.3 million during 2016, as compared to the prior year, primarily due to a $5.5 million net decrease in share-based compensation expense related to the grant of stock options under the 2013 Equity Plan, a $1.2 million decrease in compensation and related costs primarily due to a reduction in compensation expenses associated with two executives who departed as part of an executive management reorganization in January 2016, a $0.7 million decrease in facility and other related support costs, and a $0.2 million decrease in non-income taxes, partially offset by a $1.9 million increase in severance costs associated with the streamlining of our finance organization, a $1.7 million increase in legal, consulting, and other advisory costs, a $1.2 million increase in travel and entertainment expenditures, a $1.0 million increase in other aircraft-related operating costs, and a $0.6 million increase in recruiting costs. The $5.5 million decrease in share-based compensation expense is primarily due to a $1.6 million reversal of previously recorded share-based compensation expense associated with the stock options of two executives who departed as part of an executive management reorganization in January 2016 that were unvested as of their departure dates, and a decrease of $4.3 million in share-based compensation no longer being recognized due to their departures. Included in the above components is an aggregate $1.4 million favorable foreign currency exchange impact. General and administrative headcount increased 4.2% to 323 at December 31, 2016 from 310 at December 31, 2015.

As a result of the grant of stock options under the 2013 Equity Plan, we expect that share-based compensation expense, a portion of which is recognized as general and administrative expense, will continue to be a significant recurring expense. As of December 31, 2016, we estimated that approximately $15.7 million of additional share-based compensation expense will be recognized as general and administrative expense over a remaining weighted average period of 1.8 years. See “Overview” and Note 12, Share-based Compensation, to the Consolidated Financial Statements for further information regarding the 2013 Equity Plan and related share-based compensation expense.

General and administrative expenses decreased $15.6 million during 2015, as compared to the prior year, primarily due to a $10.9 million decrease in compensation and related costs due to a decrease in staffing levels, a $2.2 million decrease in legal, consulting, and other advisory costs, a $2.2 million decrease in facility and other related support costs, a $0.9 million decrease in travel and entertainment expenditures, a $0.8 million decrease in other aircraft-related operating costs, and a $0.5 million decrease in recruiting costs, partially offset by a $2.9 million increase in share-based compensation expense related to the grant of stock options under the 2013 Equity Plan. Included in the above components is an aggregate $2.5 million favorable foreign currency exchange impact. General and administrative headcount decreased 9.9% to 310 at December 31, 2015 from 344 at December 31, 2014.

Research and development expenses. Research and development expenses consist of the personnel costs for our software engineering personnel, depreciation of equipment, and other related costs. The following table summarizes research and development expenses and amortization of capitalized software development costs (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Gross research and development expenses before capitalized software development costs	$73,142	$74,804	$111,751	-2.2 %	-33.1 %
Capitalized software development costs	0	(9,598)	(8,396)	-100.0 %	14.3 %
Total research and development expenses	$73,142	$65,206	$103,355	12.2 %	-36.9 %
Amortization of capitalized software development costs included in cost of product licenses revenues	$7,357	$7,212	$5,222	2.0 %	38.1 %

Research and development expenses, before capitalization of software development costs, decreased $1.7 million during 2016, as compared to the prior year, primarily due to a $0.8 million decrease in compensation and related costs due to a change in staffing composition, a $0.6 million decrease in facility and other related support costs, and a $0.3 million decrease in consulting and advisory costs, partially offset by a $0.2 million increase in travel and entertainment expenditures. Research and development headcount increased 11.1% to 512 at December 31, 2016 from 461 at December 31, 2015. We do not expect to capitalize material software development costs in the near term as we have significantly accelerated the pace of our software development efforts and increased the frequency of our software releases subsequent to the release of MicroStrategy 10, resulting in software development costs being expensed as incurred.

As a result of the grant of stock options under the 2013 Equity Plan, we expect that share-based compensation expense, a portion of which is recognized as research and development expense, will continue to be a significant recurring expense. As of December 31, 2016, we estimated that approximately $3.4 million of additional share-based compensation expense will be recognized as research and development expense over a remaining weighted average period of 2.4 years. See “Overview” and Note 12, Share-based Compensation, to the Consolidated Financial Statements for further information regarding the 2013 Equity Plan and related share-based compensation expense.

Research and development expenses, before capitalization of software development costs, decreased $36.9 million during 2015, as compared to the prior year, primarily due to a $27.8 million decrease in compensation and related costs due to a decrease in staffing levels, a $5.0 million decrease in facility and other related support costs, a $2.4 million decrease in consulting and advisory costs, a $0.9 million decrease in travel and entertainment expenditures, and a $0.8 million decrease in recruiting costs. In 2015, we capitalized $9.6 million in costs associated with development efforts related to MicroStrategy 10, as compared to $8.4 million in software development costs that were capitalized in the prior year. Research and development headcount decreased 28.5% to 461 at December 31, 2015 from 645 at December 31, 2014.

Restructuring costs. In the third quarter of 2014, we adopted the 2014 Restructuring Plan, which included a workforce reduction of 777 employees. Restructuring costs consisted primarily of employee severance and related benefit costs, contract termination costs, and other related costs associated with our restructuring activities. We implemented substantially all of the 2014 Restructuring Plan by the end of 2014. Total restructuring costs were $0.3 million and

$14.7 million for the years ended December 31, 2015 and 2014, respectively. Total restructuring costs for the year ended December 31, 2016 were not material. The 2014 Restructuring Plan has been fully implemented and we do not expect any future costs associated with the 2014 Restructuring Plan. See Note 8, Restructuring, to the Consolidated Financial Statements for further information regarding the 2014 Restructuring Plan and related restructuring costs by major cost category.

Other Income, Net

Other income, net is comprised primarily of foreign currency transaction gains and losses and realized and unrealized gains and losses on our foreign currency forward contracts. During 2016, other income, net, of $3.2 million was comprised primarily of foreign currency transaction net gains, arising mainly from the revaluation of U.S. dollar denominated cash balances held at international locations, in addition to outstanding balances denominated in the British Pound, which has declined in value as compared to the U.S. dollar. During 2015, other income, net, of $3.6 million was comprised primarily of $2.4 million in foreign currency transaction net gains, arising mainly from the revaluation of U.S. dollar denominated cash balances held at international locations, $0.5 million in net realized and unrealized gains from the settlement of certain foreign currency forward contracts, and the reclassification of a $0.3 million foreign currency translation gain from other comprehensive income as a result of the completion of the liquidation of one of our foreign subsidiaries as part of our 2014 Restructuring Plan. During 2014, other income, net, of $5.8 million was comprised primarily of $5.3 million in foreign currency transaction net gains, arising mainly from the revaluation of U.S. dollar denominated cash balances held at international locations, and $1.6 million in net unrealized gains from outstanding foreign currency forward contracts, offset by $0.5 million in net realized and unrealized losses from the settlement of certain foreign currency forward contracts, $0.3 million in net losses on disposal of fixed assets, and $0.3 million in impairment losses related to software developed for internal use.

Provision for Income Taxes

During 2016, we recorded a provision for income taxes of $22.1 million that resulted in an effective tax rate of 19.6%, as compared to a provision for income taxes of $31.9 million that resulted in an effective tax rate of 23.2% during 2015. The change in our effective tax rate in 2016, as compared to the prior year, was primarily due to the 2016 change in the proportion of U.S. versus foreign income and certain discrete tax benefits recorded in 2016.

As of December 31, 2016, we have utilized all of our U.S. federal NOL carryforwards, but had foreign NOL carryforwards of $0.7 million. As of December 31, 2016, foreign NOL carryforwards, other temporary differences and carryforwards, and credits resulted in deferred tax assets, net of valuation allowances and deferred tax liabilities, of $11.4 million. As of December 31, 2016, we had a valuation allowance of $0.8 million primarily related to certain foreign tax credit carryforwards that, in our present estimation, more likely than not will not be realized.

If we are unable to sustain profitability in future periods, we may be required to increase the valuation allowance against our deferred tax assets, which could result in a charge that would materially adversely affect net income in the period in which the charge is incurred. We will continue to assess regularly the realizability of deferred tax assets.

Except as discussed below, we intend to indefinitely reinvest our undistributed earnings of all of our foreign subsidiaries. Therefore, the annualized effective tax rate applied to our pre-tax income does not include any provision for U.S. federal and state income taxes on the amount of the undistributed foreign earnings. U.S. federal tax laws, however, require us to include in our U.S. taxable income certain investment income earned outside of the United States in excess of certain limits (“Subpart F deemed dividends”). Because Subpart F deemed dividends are already required to be recognized in our U.S. federal income tax return, we regularly repatriate Subpart F deemed dividends to the United States and no additional tax is incurred on the distribution. We repatriated Subpart F deemed dividends of $1.9 million and $1.3 million in 2016 and 2014, respectively, with no additional tax. We did not repatriate any Subpart F deemed dividends in 2015 because we did not report any Subpart F income on our 2014 U.S. tax return.

During 2014, we recorded a provision for income taxes of $6.0 million, resulting in an effective tax rate of 54.4%. The change in our effective tax rate in 2015, as compared to the prior year, was primarily due to a change in the overall income amount for 2015 and a change in the proportion of U.S. versus foreign income.

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Deferred Revenue and Advance Payments

Deferred revenue and advance payments represent subscription services, product support, and other services fees that are collected in advance and recognized over the contract service period, and product licenses revenues relating to multiple-element software arrangements that include future deliverables.

The following table summarizes deferred revenue and advance payments (in thousands), as of:

	December 31,		
	2016	2015	2014
Current:			
Deferred product licenses revenue	$13,023	$13,506	$10,927
Deferred subscription services revenue	18,303	15,763	16,018
Deferred product support revenue	162,781	158,738	168,833
Deferred other services revenue	10,015	9,149	10,564
Gross current deferred revenue and advance payments	204,122	197,156	206,342
Less: unpaid deferred revenue	(98,587)	(96,461)	(97,929)
Net current deferred revenue and advance payments	$105,535	$100,695	$108,413
Non-current:			
Deferred product licenses revenue	$9,118	$5,397	$8,012
Deferred subscription services revenue	1,307	2,138	750
Deferred product support revenue	5,751	7,607	7,505
Deferred other services revenue	690	795	1,047
Gross non-current deferred revenue and advance payments	16,866	15,937	17,314
Less: unpaid deferred revenue	(2,951)	(6,942)	(6,496)
Net non-current deferred revenue and advance payments	$13,915	$8,995	$10,818
Total current and non-current:			
Deferred product licenses revenue	$22,141	$18,903	$18,939
Deferred subscription services revenue	19,610	17,901	16,768
Deferred product support revenue	168,532	166,345	176,338
Deferred other services revenue	10,705	9,944	11,611
Gross current and non-current deferred revenue and advance payments	220,988	213,093	223,656
Less: unpaid deferred revenue	(101,538)	(103,403)	(104,425)
Net current and non-current deferred revenue and advance payments	$119,450	$109,690	$119,231

We offset our accounts receivable and deferred revenue for any unpaid items included in deferred revenue and advance payments.

Total gross deferred revenue and advance payments increased $7.9 million in 2016, as compared to the prior year, primarily due to an increase in deferred revenue from new product licenses, product support, subscription services, and other services contracts. Total gross deferred revenue and advance payments decreased $10.6 million in 2015, as compared to the prior year, primarily due to the recognition of previously deferred product licenses, product support, and other services revenues, partially offset by an increase in deferred revenue from new subscription services contracts.

We expect to recognize approximately $204.1 million of deferred revenue and advance payments over the next 12 months. However, the timing and ultimate recognition of our deferred revenue and advance payments depend on our performance of various service obligations, and the amount of deferred revenue and advance payments at any date should not be considered indicative of revenues for any succeeding period.

Liquidity and Capital Resources

Liquidity. Our principal sources of liquidity are cash and cash equivalents and on-going collection of our accounts receivable. Cash and cash equivalents include holdings in bank demand deposits, money market instruments, certificates of deposit, and U.S. Treasury securities. We also periodically invest a portion of our excess cash in short-term investments with stated maturity dates between three months and one year from the purchase date.

As of December 31, 2016 and 2015, the amount of cash and cash equivalents and short-term investments held by U.S. entities was $279.8 million and $219.3 million, respectively, and by non-U.S. entities was $309.6 million and $266.4 million, respectively. We earn a significant amount of our revenues outside the United States and, except for Subpart F deemed dividends, we intend to indefinitely reinvest undistributed earnings of all of our non-U.S. entities. We do not anticipate needing to repatriate the cash or cash equivalents held by non-U.S. entities to the United States to finance our U.S. operations. However, if we were to elect to repatriate these amounts, we would generate U.S. taxable income to the extent of our undistributed foreign earnings, which amounted to $322.0 million at December 31, 2016. Although the tax impact of repatriating these earnings is difficult to determine and our effective tax rate could increase as a result of any such repatriation, we would not expect the maximum effective tax rate that would be applicable to such repatriation to exceed the U.S. statutory rate of 35.0%, after considering applicable foreign tax credits.

We believe that existing cash and cash equivalents and short-term investments held by us and cash and cash equivalents anticipated to be generated by us are sufficient to meet working capital requirements, anticipated capital expenditures, and contractual obligations for at least the next 12 months.

The following table sets forth a summary of our cash flows (in thousands) and related percentage changes for the periods indicated:

	Years Ended December 31,			% Change	% Change
	2016	2015	2014	in 2016	in 2015
Net cash provided by operating activities	$110,589	$149,699	$14,600	-26.1 %	925.3 %
Net cash provided by (used in) investing activities	$4,209	$(7,681)	$(82,110)	-154.8 %	-90.6 %
Net cash (used in) provided by financing activities	$(1,004)	$9,178	$(1,470)	-110.9 %	-724.4 %

Net cash provided by operating activities. The primary source of our cash provided by operating activities is cash collections of our accounts receivable from customers following the sales and renewals of our software licenses, technical software support, software updates and upgrades, as well as consulting, education, and subscription services. Our primary uses of cash in operating activities are for personnel related expenditures for software development, personnel related expenditures for providing consulting, education, and subscription services, and for sales and marketing costs, general and administrative costs, and income taxes.

Net cash provided by operating activities was $110.6 million, $149.7 million, and $14.6 million during 2016, 2015, and 2014, respectively. The decrease in net cash provided by operating activities during 2016, as compared to the prior year, was due to a $25.7 million decrease from changes in non-cash items and a $15.0 million decrease in net income, offset by a $1.6 million increase from changes in operating assets and liabilities. The increase in net cash provided by operating activities during 2015, as compared to the prior year, was due to a $100.9 million increase in net income, a $23.0 million increase from changes in operating assets and liabilities, and an $11.3 million increase from changes in non-cash items. Non-cash items consist of depreciation and amortization, bad debt expense, unrealized net gains and losses on foreign currency forward contracts, the non-cash portion of adjustments to accrued restructuring costs, deferred taxes, release of liabilities for unrecognized tax benefits, share-based compensation expense, excess tax benefits from share-based compensation arrangements, and reclassification of foreign currency translation adjustments as a result of the completion of the liquidation of one of our foreign subsidiaries.

Net cash provided by (used in) investing activities. The changes in net cash provided by (used in) investing activities primarily relate to purchases and redemptions of short-term investments, expenditures on property and equipment, capitalized software development costs, and changes in restricted cash. Net cash provided by investing activities was $4.2 million during 2016. Net cash used in investing activities was $7.7 million and $82.1 million during 2015 and 2014, respectively. The increase in net cash provided by investing activities during 2016, as compared to the prior year, was primarily due to a $118.8 million decrease in purchases of short-term investments, a $9.6 million decrease in capitalized software development costs, and a $1.1 million decrease in purchases of property and equipment, partially offset by a $117.5 million decrease in proceeds from the redemption of U.S. Treasury securities. The decrease in net cash used in investing activities during 2015, as compared to the prior year, was primarily due to a $170.3 million increase in proceeds from the redemption of U.S. Treasury securities and an $8.9 million decrease in purchases of property and equipment, partially offset by a $103.7 million increase in purchases of short-term investments and a $1.2 million increase in capitalized software development costs.

Net cash (used in) provided by financing activities. The changes in net cash (used in) provided by financing activities primarily relate to the exercise of stock options under the 2013 Equity Plan, excess tax benefits from share-based compensation arrangements, and payments on capital lease and other financing arrangements. Net cash used in financing activities was $1.0 million and $1.5 million during 2016 and 2014, respectively. Net cash provided by financing activities was $9.2 million during 2015. The increase in net cash used in financing activities during 2016, as compared to the prior year, was primarily due to an $7.9 million decrease in proceeds from the exercise of stock options under the 2013 Equity Plan, and a $3.7 million payment to tax authorities for shares withheld for taxes related to the net exercise of a stock option under the 2013 Equity Plan, partially offset by a $1.3 million decrease in payments on capital lease and other financing arrangements. The increase in net cash provided by financing activities during 2015, as compared to the prior year, was due to an $8.7 million increase in proceeds from the exercise of stock options under the 2013 Equity Plan, a $1.1 million increase in excess tax benefits from share-based compensation arrangements, and a $0.9 million decrease in payments on capital lease and other financing arrangements.

Share repurchases. Our Board of Directors has authorized us to repurchase up to an aggregate of $800.0 million of our class A common stock from time to time on the open market through April 29, 2018 (the "2005 Share Repurchase Program"), although the program may be suspended or discontinued by us at any time. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. The 2005 Share Repurchase Program may be funded using working capital, as well as proceeds from any other funding arrangements that we may enter into in the future. During the years ended December 31, 2016, 2015, and 2014, we did not repurchase any shares of our class A common stock pursuant to the 2005 Share Repurchase Program.

Contractual obligations. As disclosed in Note 10, Commitments and Contingencies, to the Consolidated Financial Statements, we lease office space and computer and other equipment under operating lease agreements. We also lease certain computer and other equipment under capital lease agreements and license certain software under other financing arrangements. Under the lease agreements, in addition to base rent, we are generally responsible for certain taxes, utilities and maintenance costs, and other fees; and several leases include options for renewal or purchase. The following table shows future minimum rent payments under noncancellable operating and capital leases and agreements with initial terms of greater than one year, net of total future minimum rent payments to be received under noncancellable sublease agreements (in thousands), based on the expected due dates of the various installments as of December 31, 2016:

	Payments due by period ended December 31,				
	Total	2017	2018-2019	2020-2021	Thereafter
Contractual Obligations:					
Operating leases	$84,324	$20,461	$ 37,853	$ 20,203	$ 5,807
Capital leases and other financing arrangements	2,202	1,101	1,101	0	0

Total	$86,526	$21,562	$ 38,954	$ 20,203	$ 5,807

Unrecognized tax benefits. As of December 31, 2016, we had $3.5 million of total gross unrecognized tax benefits, including interest accrued, recorded in other long-term liabilities. The timing of any payments that could result from these unrecognized tax benefits will depend on a number of factors, and accordingly the amount and period of any future payments cannot be estimated. We do not expect any significant tax payments related to these obligations during 2017.

Off-balance sheet arrangements. As of December 31, 2016, we did not have any off-balance sheet arrangements that had or were reasonably likely to have a current or future material impact on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Recent Accounting Standards

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"), which supersedes nearly all existing revenue recognition guidance. The standard's core principle is that an entity should 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. The standard creates a five-step model to achieve its core principle: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the separate performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. In addition, entities must disclose sufficient information to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Qualitative and quantitative disclosures are required about: (i) the entity's contracts with customers; (ii) the significant judgments, and changes in judgments, made in applying the guidance to those contracts; and (iii) any assets recognized from the costs to obtain or fulfill a contract with a customer. In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers (Topic 606) – Deferral of the Effective Date, which defers the effective date of ASU 2014-09 to interim and annual periods beginning January 1, 2018. The standard allows entities to apply the standard retrospectively to each prior reporting period presented ("full retrospective adoption") or retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial application ("modified retrospective adoption"). We plan to adopt this guidance on January 1, 2018, and continue to evaluate the impact of adopting under the modified versus the full retrospective method. We are currently in the process of determining the impact of the new revenue recognition guidance on our revenue transactions, including any impacts on associated processes, systems, and internal controls. Our evaluation has included determining whether the unit of account (i.e., performance obligations) will change as compared to current GAAP, as well as determining the standalone selling price of each performance obligation. Standalone selling prices under the new guidance may not be substantially different from our current methodologies of establishing VSOE of fair value on multiple element arrangements. Based on initial assessments, we have identified certain arrangements where revenue may be recognized earlier as compared to current GAAP, in particular term licenses and sales to resellers and OEMs who purchase our products for resale. We expect to recognize license revenue from term licenses upon delivery of the software, rather than over the term of the arrangement. For reseller and OEM deals, we expect to recognize revenue when we transfer control of the products to the reseller or OEM, less potential adjustments for returns or price protection, rather than waiting for the reseller or OEM to sell the products to an end user. We expect to begin capitalizing certain sales commissions upon adoption of the new standard and are currently in the process of evaluating the period over which to amortize these capitalized costs. We continue to evaluate the impact of this guidance and its subsequent amendments on our consolidated financial position, results of operations, and cash flows, and any preliminary assessments are subject to change.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) ("ASU 2016-02"), which requires lease assets and lease liabilities be recognized for all leases, in addition to the disclosure of key information to enable users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from an entity's leasing arrangements. ASU 2016-02 defines a lease as a contract, or part of a contract, that conveys both (i) the right to obtain economic benefits from and (ii) direct the use of an identified asset for a period of time in exchange for consideration. Under ASU 2016-02, leases are classified as either finance or operating leases. For finance leases, a lessee shall recognize in profit or loss the amortization of the lease asset and interest on the lease liability. For operating leases, a lessee shall recognize in profit or loss a single lease cost, calculated so that the remaining cost of the lease is allocated over the remaining lease term, generally on a straight-line basis. ASU 2016-02 requires the recognition and measurement of leases at the beginning of the earliest period presented using a modified retrospective approach and is effective for interim and annual periods beginning January 1, 2019. Early adoption is permitted. We are currently evaluating the impact of this guidance on our consolidated financial position, results of operations, and cash flows.

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09"), to simplify certain aspects of accounting for share-based payment transactions. Under ASU 2016-09, all excess tax benefits should be recognized as income tax expense or benefit in the income statement, regardless of whether the benefit reduces taxes payable in the current period. The excess tax benefits will be combined with other income tax cash flows within operating activities in the statement of cash flows. In addition, excess tax benefits or tax deficiencies will no longer be included in the calculation of assumed proceeds under the treasury stock method of computing diluted earnings per share. ASU 2016-09 also allows companies to make an accounting policy election to either estimate the number of awards expected to vest or to account for forfeitures as they occur, when accruing share-based compensation expense. Lastly, ASU 2016-09 permits employers to withhold up to the employee's maximum statutory tax rate in applicable jurisdictions and still qualify for the exception to liability classification. Cash paid by an employer when directly withholding shares for tax-withholding purposes should be classified as a financing activity in the statement of cash flows. ASU 2016-09 is effective for interim and annual periods beginning January 1, 2017. Early adoption is permitted, however an entity that elects early adoption must adopt all of the amendments in the same period. We will adopt this guidance on January 1, 2017 and will recognize excess tax benefits in our Consolidated Statements of Operations, instead of in additional paid-in capital, on a prospective basis. We also plan to combine excess tax benefits with other income tax cash flows in our Consolidated Statements of Cash Flows on a prospective basis. Upon adoption, excess tax benefits or tax deficiencies will no longer be included in the calculation of our diluted earnings per share. In addition, we expect to make an accounting policy election to account for forfeitures as they occur, the impact of which is generally consistent with our current forfeiture estimate. We do not expect to record a cumulative-effect adjustment to retained earnings as of the beginning of the period in which ASU 2016-09 is adopted. The remaining amendments are not expected to have a material impact on our consolidated financial position, results of operations, and cash flows.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory ("ASU 2016-16"), to improve the accounting for income tax effects of intra-entity transfers of assets other than inventory. Under ASU 2016-16, the deferral of the income tax consequences of intra-entity transfers of assets other than inventory is eliminated. Entities will be required to recognize the income tax consequences of intra-entity transfers of assets other than inventory when the transfers occur. The standard requires a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption using a modified retrospective approach. ASU 2016-16 is effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted, however an entity can only adopt the guidance in the first interim period of a fiscal year. We expect to adopt this guidance on January 1, 2018 and are currently evaluating the impact of this guidance on our consolidated financial position, results of operations, and cash flows.

In November 2016, the FASB issued Accounting Standards Update No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash (a consensus of the FASB Emerging Issues Task Force) ("ASU 2016-18"), to address the diversity in practice that currently exists regarding the classification and presentation of changes in restricted cash on the statement of cash flows. Under ASU 2016-18, entities will be required to include restricted cash and restricted cash equivalents with total cash and cash equivalents when reconciling the beginning and end of period amounts on the statement of cash flows. Entities will also be required to disclose information about the nature of their restricted cash and restricted cash equivalents. Additionally, if cash, cash equivalents, restricted cash and restricted cash equivalents are presented in more than one line item in the statement of financial position, entities will be required to present a reconciliation, either on the face of the statement of cash flows or disclosed in the notes, of the totals in the statement of cash flows to the related line item captions in the statement of financial position. ASU 2016-18 is effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted, however if an entity adopts the guidance in an interim period, the adjustments must be reflected as of the beginning of the fiscal year. The standard requires entities to apply the standard retrospectively to each period presented. We expect to adopt this guidance on January 1, 2017 and will apply the required updates to our consolidated cash flow statements for all periods presented. We do not expect this guidance to impact our consolidated financial position, results of operations, and footnote disclosures.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk
The following discussion about our market risk exposures involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements.

We are exposed to the impact of both interest rate changes and foreign currency fluctuations.

Interest Rate Risk. We face exposure to changes in interest rates primarily relating to our investments. We generally invest our excess cash in short-term, highly-rated, fixed-rate financial instruments. These fixed-rate instruments are subject to interest rate risk and may fall in value if interest rates increase. We do not hold or invest in these fixed-rate instruments for trading purposes or speculation. As of December 31, 2016, we held approximately $187.3 million of investments in U.S. Treasury securities and certificates of deposit with stated maturity dates between three months and one year from the purchase date, and we intend to hold these investments until maturity.

Foreign Currency Risk. We conduct a significant portion of our business in currencies other than the U.S. dollar, the currency in which we report our Consolidated Financial Statements. International revenues accounted for 39.3%, 38.3%, and 41.1% of our total revenues for the years ended December 31, 2016, 2015, and 2014, respectively. We anticipate that international revenues will continue to account for a significant portion of our total revenues. The functional currency of each of our foreign subsidiaries is the local currency.

Assets and liabilities of our foreign subsidiaries are translated into U.S. dollars at exchange rates in effect as of the applicable balance sheet date and any resulting translation adjustments are included as an adjustment to stockholders' equity. Revenues and expenses generated from these subsidiaries are translated at average monthly exchange rates during the quarter in which the transactions occur. Gains and losses from transactions in local currencies are included in net income.

As a result of transacting in multiple currencies and reporting our financial statements in U.S. dollars, our operating results may be adversely impacted by currency exchange rate fluctuations in the future. The impact of foreign currency exchange rate fluctuations on current and comparable periods is described in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

We cannot predict the effect of exchange rate fluctuations upon our future results. We attempt to minimize our foreign currency risk by converting our excess foreign currency held in foreign jurisdictions to U.S. dollar denominated cash and investment accounts. Although we were not party to any foreign currency forward contracts as of December 31, 2016, from time to time we have entered into foreign currency forward contracts to hedge certain risks associated with foreign currency exchange rate exposure, and may do so again in the future. We manage the use of foreign exchange derivative instruments centrally, and we do not hold or enter into derivative financial instruments for trading purposes or speculation. See Note 4, Fair Value Measurements, to the Consolidated Financial Statements for further information on foreign currency forward contracts. We cannot be certain that any future hedging techniques will be successful or that our business, results of operations, financial condition, and cash flows will not be materially adversely affected by exchange rate fluctuations.

As of December 31, 2016 and 2015, a 10% adverse change in foreign currency exchange rates versus the U.S. dollar would have decreased our aggregate reported cash and cash equivalents and short-term investments by 0.2% and 0.3%, respectively. The exposure to an adverse change in foreign currency rates as of December 31, 2016 decreased, as compared to the prior year, primarily due to a decrease of cash balances in our non-U.S. dollar-based bank accounts. If average exchange rates during the year ended December 31, 2016 had changed unfavorably by 10%, our revenues for the year ended December 31, 2016 would have decreased by 3.5%. During the year ended December 31, 2016, our revenues were lower by 1.5% as a result of a 2.6% unfavorable change in weighted average exchange rates, as compared to the prior year.

Item 8. Financial Statements and Supplementary Data

Our Consolidated Financial Statements, together with the related notes and the associated Reports of Independent Registered Public Accounting Firm, are set forth on the pages indicated in Item 15.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
None.

Item 9A. Controls and Procedures
Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this Annual Report, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Such internal control includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2016. In making this assessment, our management used the criteria set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on its assessment, our management has determined that, as of December 31, 2016, our internal control over financial reporting is effective based on those criteria.

KPMG LLP has issued an attestation report on our internal control over financial reporting. This report is included in the Reports of Independent Registered Public Accounting Firm in Item 15.

Changes in Internal Control Over Financial Reporting

During the third quarter of 2016, we began implementing a plan to transform our worldwide finance and accounting organization. Previously, our finance and accounting activities relating to each of the countries where we operate were decentralized, and conducted by personnel based within each respective country. The transformation will result in the consolidation of our worldwide finance and accounting functions into three geographically based centers of excellence. We expect this transformation to be substantially completed by the end of the first quarter of 2017. While the nature and operation of our key transaction-level controls will not materially change as a result of the transformation, the personnel executing the controls and the locations where the controls are performed have changed and will continue to change as we complete the implementation of this transformation. We believe that we have maintained appropriate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal year ended December 31, 2016 and that our internal control over financial reporting has not been, and is not reasonably likely to be, materially affected by the transformation of our finance and accounting organization.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated herein by reference to the information provided under the headings “Executive Officers of the Company,” “Election of Directors – Nominees,” and “Corporate Governance and the Board of Directors and its Committees” in our definitive proxy statement to be filed with the SEC not later than 120 days after the fiscal year ended December 31, 2016 (the “2017 Proxy Statement”).

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to the information provided under the headings “Executive and Director Compensation,” “Compensation Committee Report,” and “Corporate Governance and the Board of Directors and its Committees – Compensation Committee” in the 2017 Proxy Statement.

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

The information required by this Item is incorporated herein by reference to the information provided under the headings “Security Ownership of Certain Beneficial Owners and Management,” and “Executive and Director Compensation” in the 2017 Proxy Statement.

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

The information required by this Item is incorporated herein by reference to the information provided under the heading “Corporate Governance and the Board of Directors and its Committees” in the 2017 Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference to the information provided under the heading “Independent Registered Public Accounting Firm Fees and Services” in the 2017 Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

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

(b) Exhibits

We hereby file as part of this Annual Report on Form 10 K the exhibits listed in the Index to Exhibits.

(c) Financial Statement Schedule

The following financial statement schedule is filed herewith:

Schedule II—Valuation and Qualifying Accounts

All other items included in an Annual Report on Form 10 K are omitted because they are not applicable or the answers thereto are none.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

MicroStrategy Incorporated:

We have audited MicroStrategy Incorporated's (the Company) internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit 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 effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

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

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016, and our report dated February 10, 2017, expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

McLean, Virginia

February 10, 2017

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

MicroStrategy Incorporated:

We have audited the accompanying consolidated balance sheets of MicroStrategy Incorporated and subsidiaries (the Company) as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016. In connection with our audits of the consolidated financial statements, we have also audited the financial statement schedule listed in the index appearing under Item 15(a)(2). These consolidated financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and the financial statement schedule based on our audits.

We conducted our audits 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), MicroStrategy Incorporated's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 10, 2017, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

McLean, Virginia

February 10, 2017

MICROSTRATEGY INCORPORATED

CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)

	December 31, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 401,975	$ 292,341
Restricted cash	737	618
Short-term investments	187,408	193,320
Accounts receivable, net	83,319	68,154
Prepaid expenses and other current assets	11,548	10,881
Total current assets	684,987	565,314
Property and equipment, net	57,436	65,664
Capitalized software development costs, net	8,497	15,855
Deposits and other assets	5,695	2,072
Deferred tax assets, net	11,704	7,989
Total assets	$ 768,319	$ 656,894
Liabilities and Stockholders’ Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 36,628	$ 31,840
Accrued compensation and employee benefits	43,323	40,067
Accrued restructuring costs	0	56
Deferred revenue and advance payments, net	105,535	100,695
Total current liabilities	185,486	172,658
Deferred revenue and advance payments, net	13,915	8,995
Other long-term liabilities	16,447	19,943
Deferred tax liabilities	294	17
Total liabilities	216,142	201,613
Commitments and Contingencies		
Stockholders’ Equity		
Preferred stock undesignated, $0.001 par value; 5,000 shares authorized; no shares issued or outstanding	0	0
Class A common stock, $0.001 par value; 330,000 shares authorized; 15,805 shares issued and 9,400 shares outstanding, and 15,771 shares issued and 9,366 shares outstanding, respectively	16	16
Class B convertible common stock, $0.001 par value; 165,000 shares authorized; 2,035 shares issued and outstanding, and 2,035 shares issued and outstanding, respectively	2	2
Additional paid-in capital	543,974	534,651
Treasury stock, at cost; 6,405 shares	(475,184)	(475,184)
Accumulated other comprehensive loss	(10,743)	(7,408)
Retained earnings	494,112	403,204
Total stockholders’ equity	552,177	455,281

Total liabilities and stockholders' equity	$ 768,319	$ 656,894

The accompanying notes are an integral part of these Consolidated Financial Statements.

MICROSTRATEGY INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Years Ended December 31,		
	2016	2015	2014
Revenues:			
Product licenses	$113,503	$119,143	$125,952
Subscription services	30,574	27,839	22,322
Total product licenses and subscription services	144,077	146,982	148,274
Product support	285,079	281,740	295,703
Other services	83,005	101,147	135,853
Total revenues	512,161	529,869	579,830
Cost of revenues:			
Product licenses	8,573	8,118	6,957
Subscription services	12,765	13,051	17,560
Total product licenses and subscription services	21,338	21,169	24,517
Product support	15,001	12,748	14,241
Other services	56,808	67,191	96,452
Total cost of revenues	93,147	101,108	135,210
Gross profit	419,014	428,761	444,620
Operating expenses:			
Sales and marketing	158,740	148,522	225,086
Research and development	73,142	65,206	103,355
General and administrative	79,462	80,732	96,343
Restructuring costs	45	279	14,732
Total operating expenses	311,389	294,739	439,516
Income from operations	107,625	134,022	5,104
Interest income, net	2,203	284	162
Other income, net	3,218	3,558	5,785
Income before income taxes	113,046	137,864	11,051
Provision for income taxes	22,138	31,933	6,016
Net income	90,908	105,931	5,035
Basic earnings per share (1)	$7.96	$9.33	$0.45
Weighted average shares outstanding used in computing basic earnings per share	11,425	11,355	11,301
Diluted earnings per share (1)	$7.89	$9.18	$0.44
Weighted average shares outstanding used in computing diluted earnings per share	11,516	11,539	11,356

(1) Basic and fully diluted earnings per share for class A and class B common stock are the same.

The accompanying notes are an integral part of these Consolidated Financial Statements.

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MICROSTRATEGY INCORPORATED

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)

	Years Ended December 31,		
	2016	2015	2014
Net income	$90,908	$105,931	$5,035
Other comprehensive loss, net of applicable taxes:			
Foreign currency translation adjustment	(3,347)	(3,018)	(3,585)
Less: reclassification adjustment for translation gain included in other income	0	280	0
Foreign currency translation adjustment, net	(3,347)	(2,738)	(3,585)
Unrealized gain (loss) on short-term investments	12	(27)	53
Total other comprehensive loss	(3,335)	(2,765)	(3,532)
Comprehensive income	$87,573	$103,166	$1,503

The accompanying notes are an integral part of these Consolidated Financial Statements.

MICROSTRATEGY INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)

		Class A Common Stock		Class B Convertible Common Stock		Additional Paid-in	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Retained
	Total	Shares	Amount	Shares	Amount	Capital	Shares	Amount		Earnings
Balance at January 1, 2014	$310,326	15,478	$ 15	2,227	$ 2	$494,086	(6,405)	$(475,184)	$ (831)	$292,238
Net income	5,035	0	0	0	0	0	0	0	0	5,035
Other comprehensive loss	(3,532)	0	0	0	0	0	0	0	(3,532)	0
Conversion of class B to class A common stock	0	172	0	(172)	0	0	0	0	0	0
Issuance of class A common stock under stock option plans	856	10	1	0	0	855	0	0	0	0
Share-based compensation expense	11,786	0	0	0	0					