

EXA CORP

FORM 10-K (Annual Report)

Filed 03/22/17 for the Period Ending 01/31/17

Address	55 NETWORK DRIVE BURLINGTON, MA 01803
Telephone	781-676-8500
CIK	0000890264
Symbol	EXA
SIC Code	7372 - Prepackaged Software
Industry	Software
Sector	Technology
Fiscal Year	01/31

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended January 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission File Number: 001-35584

EXA CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

04-3139906
(I.R.S. Employer
Identification No.)

55 Network Drive
Burlington, MA 01803
(Address of Principal Executive Offices, Including Zip Code)

(781) 564-0200
(Registrant's Telephone Number, Including Area Code)

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

Title of class
Common Stock, \$.001 par value

Name of exchange on which registered
NASDAQ Global Market

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 (§ 229.405 of this chapter) 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

Smaller reporting company

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

Aggregate market value of the voting stock held by non-affiliates of the registrant as of July 31, 2016 based on the closing price of the registrant's common stock on such date as reported by the NASDAQ Global Market: \$199,689,982.

As of March 17, 2017, 14,896,484 shares of the registrant's common stock, \$0.001 par value per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for our Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission on or before May 31, 2017 are incorporated by reference in Part III of this Annual Report on Form 10-K.

EXA CORPORATION
ANNUAL REPORT ON FORM 10-K
FOR FISCAL YEAR ENDED January 31, 2017
TABLE OF CONTENTS

	Page
<u>PART I</u>	
Item 1. Business	2
Item 1A. Risk Factors	13
Item 1B. Unresolved Staff Comments	24
Item 2. Properties	24
Item 3. Legal Proceedings	25
Item 4. Mine Safety Disclosures	25
<u>PART II</u>	
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	26
Item 6. Selected Financial Data	28
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	29
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	45
Item 8. Financial Statements and Supplementary Data	46
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	73
Item 9A. Controls and Procedures	73
Item 9B. Other Information	73
<u>PART III</u>	
Item 10. Directors, Executive Officers And Corporate Governance	74
Item 11. Executive Compensation	74
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	74
Item 13. Certain Relationships and Related Transactions, and Director Independence	74
Item 14. Principal Accounting Fees and Services	74
<u>PART IV</u>	
Item 15. Exhibits and Financial Statement Schedules	75
Item 16. Form 10-K Summary	76
<u>SIGNATURES</u>	77

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections entitled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements. These statements may relate to, but are not limited to, expectations of future operating results or financial performance, capital expenditures, introduction of new products, regulatory compliance, plans for growth and future operations, as well as assumptions relating to the foregoing. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. These risks and other factors include, but are not limited to, those listed under “Risk Factors.” In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “intend,” “potential,” “might,” “would,” “continue” or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially.

There may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements contained in this Annual Report on Form 10-K after we file it, whether as a result of any new information, future events or otherwise. Before you invest in our common stock, you should be aware that the occurrence of any of the events described in the “Risk Factors” section and elsewhere in this Annual Report on Form 10-K could harm our business, prospects, operating results and financial condition. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

As used herein, except as otherwise indicated by context, references to “we,” “us,” “our,” or the “Company” refer to Exa Corporation.

PART I

ITEM 1. BUSINESS

Overview

We develop, sell and support simulation software and services that manufacturers use to enhance the performance of their products, reduce product development costs and improve the efficiency of their design and engineering processes. Our solutions enable engineers and designers to augment or replace conventional methods of evaluating design alternatives that rely on expensive and inefficient physical prototypes and test facilities, such as wind tunnels used in vehicle design, with accurate digital simulations that are more useful and timely. Our simulation solutions enable our customers to gain crucial insights about design performance early in the design cycle, reducing the likelihood of expensive redesigns and late-stage engineering changes. As a result, our customers realize significant cost savings and fundamental improvements in their vehicle development process.

Simulation-driven design has enabled product and process improvements in many industries, and as a result, the process in which products are conceptualized and developed is undergoing a radical transformation. Digital simulation not only provides feedback earlier and in a more useful form than traditional approaches, but in many areas simulation has reached a level of accuracy and robustness that is sufficient to enable a manufacturer to rely solely on its results for design decisions, without prototype testing.

We currently focus primarily on the ground transportation market, including manufacturers in the passenger vehicle, highway truck, off-highway vehicle and train markets, as well as their suppliers. Over 150 manufacturers currently utilize our products and services, including the top 15 global passenger vehicle manufacturer groups such as BMW, Ford, Hyundai, Jaguar Land Rover, Nissan, Porsche, Renault, Toyota and Volkswagen; truck and off-highway vehicle manufacturers such as Hyundai, Kenworth, Kobelco, MAN, Peterbilt, Scania and Volvo Truck; and suppliers to these manufacturers, such as Cummins, Denso and Delphi. We have recently expanded our technology offerings into the fields of aerospace and oil and gas production. We are continuing to explore other markets in which we believe the capabilities of PowerFLOW have broad application, such as the chemical processing, architecture, engineering and construction, power generation, biomedical and electronics industries.

Global vehicle manufacturers face increasing pressure, from government mandates as well as from consumers, to improve the efficiency of their products and to reduce particulate and greenhouse gas emissions. This requires different powertrain choices (diesel, electric, hybrid), changes in the shape of the vehicle, and reductions in vehicle weight. Consumers also demand improved quality and durability, and equally important, innovative and emotionally expressive designs. In addition, manufacturers are offering a broader array of vehicles for different niche customer segments and geographies on a faster design refresh schedule than in the past. We believe these industry forces favor the adoption of simulation-driven design.

One of the most critical challenges for our customers in their vehicle development processes is measuring or predicting how a vehicle feature or a mechanical system will interact with air, water or other fluids. For example, developing vehicles with reduced aerodynamic drag is critical to achieving the improvements in fuel efficiency that are increasingly desired by customers and mandated by government regulations. Our core product, PowerFLOW, is an innovative software solution for simulating complex fluid flow problems, including aerodynamics, thermal management, and aeroacoustics, or wind noise. PowerFLOW relies upon proprietary technology that enables it to predict complex fluid flows with a level of reliability comparable to or better than physical testing. The combination of PowerFLOW's accuracy and timeliness provides results that are superior to those of alternative computational fluid dynamics, or CFD, methods.

We derive our revenue primarily from the sale of our simulation software, using an annual capacity-based licensing model. Our customers usually purchase PowerFLOW simulation capacity under one-year term licenses, with a minority utilizing multi-year arrangements or a "pay as you go" model. Simulation capacity may be purchased as software-only, to be run on the customer's own computer hardware, or provided in the form of software-as-a-service, via our hosted ExaCLOUD offerings. To introduce new customers to our simulation solutions, we typically perform fixed-price projects that include simulation services, along with engineering and consulting services. ExaCLOUD continues to play an increasingly important role in our new customer acquisition go-to-market model, as virtually all of our projects are now being delivered using that facility, thereby exposing our customers to its capabilities. Customers typically license our products for one application, such as aerodynamics, and over time expand to other applications such as thermal management or aeroacoustics.

We sell our products and project services primarily through our direct sales force, including sales executives and applications engineering teams deployed near our customers in the United States, United Kingdom, France, Germany, Italy, Japan, Korea and China. We also conduct business in Sweden, India, Brazil, Russia, Canada, Finland, Spain and Australia. In our customer engagement model, our applications management teams engage with our customers in long-term relationships focused on identifying problems that we can help them solve, demonstrating the value of our solutions and ensuring that the customer achieves maximum benefit from them. In this process, we interact continuously with our customers to improve our software and services and add new solutions, and at the same time deepen our knowledge of their industry.

We were founded in 1991 and had 345 employees worldwide at January 31, 2017. Our corporate headquarters, including our principal administrative, marketing, technical support, research and product development facilities, are located in Burlington, Massachusetts. Our website is www.exa.com, and we make available through the investor relations section of this site, free of charge, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission, or the SEC. Information included on our website is not included nor incorporated into our Form 10-K. We also make our code of ethics and certain other governance documents and policies available through our website. We intend to make required disclosures of amendments to our code of ethics, or waivers of a provision of our code of ethics, on the "Corporate Governance" page of our website's investor center.

Customers and Markets

Our initial focus has been on the ground transportation market, and primarily on makers of passenger vehicles, due to the immediate benefits and strong value proposition of our solutions for vehicle manufacturers. Approximately 95% of our fiscal year 2017 revenues were generated from the ground transportation market, including 61% from our ten largest customers and 10% from our largest customer.

The segments of the ground transportation market that we serve include the following:

- Passenger vehicle manufacturers;
- Highway truck manufacturers;
- Off-highway vehicle manufacturers (including agricultural, construction and military vehicles and machines);
- Train manufacturers; and
- Suppliers to the above manufacturers.

Over 150 manufacturers currently utilize our products and services, including the top 15 global passenger vehicle manufacturer groups, based on motor vehicle production volume for 2015, as reported by the Organisation Internationale des Constructeurs d'Automobiles, or the International Organization of Vehicle Manufacturers, such as BMW, Ford, Hyundai, Jaguar Land Rover, Nissan, Porsche, Renault, Toyota and Volkswagen; truck and off-highway vehicle manufacturers such as Hyundai, Kenworth, Kobelco, MAN, Peterbilt, Scania and Volvo Truck; and suppliers to these manufacturers, such as Cummins, Denso and Delphi. We continue to add new customers as well as deploy our solutions more broadly into our current installed base. We believe that the top global passenger vehicle manufacturers continue to represent significant growth opportunities for us given the breadth of our applications and additional deployment expansion.

We have also recently expanded our technology offerings into the aerospace and oil and gas production markets and are continuing to explore new markets in which we believe the capabilities of PowerFLOW have broad application, including the chemical processing, architecture and construction, power generation, biomedical and electronics industries. For example, in the aerospace market, we are working with multiple customers on simulation solutions for landing gear and jet engine design, and we recently launched and licensed our first commercial product focused on the oil and gas production industry. We believe that our solution for multi-phase fluids would also be of value to the chemical and power generation markets. This wide range of industries face increasing and often conflicting demands to:

- meet customer and regulatory requirements for improved efficiency in areas such as fuel economy and reduced environmental impact;
- meet customer desires for innovative product designs;
- optimize products for quality, performance and safety;
- accelerate product development cycles and time-to-market; and
- reduce product development, material and warranty costs.

All of these activities are significantly influenced by rising consumer expectations for more efficient and environmentally sensitive products, and by government regulatory activity that is pervasive in many industries. For example, in our key ground transportation market, the product strategies of automobile manufacturers have for years been shaped by their need to comply with an array of regulatory requirements, including mandatory corporate average fuel economy, or CAFE, standards. As an example, United States passenger car and light truck CAFE standard continues to rise, from 27.3 miles per gallon, or MPG, in 2011 to 35.5 MPG in 2017 and to a proposed, and newly under review, 56.2 MPG by 2025, requiring an approximately 60% increase in fuel economy performance over the next nine years. Similar mandates relating to particulate and CO₂ emissions apply in other segments and regions

of the transportation industry, including the Worldwide harmonized Light vehicles Test Procedure (WLTP). For manufacturers of transportation systems, achieving these goals requires major improvements in aerodynamics, weight, and propulsion systems of their products. Our customers need to attain these goals while continuing to meet customer demands for aesthetically pleasing and innovative product designs.

The automotive design process in our key ground transportation market demonstrates how these goals often conflict, requiring manufacturers to make careful trade-offs of competing values. The automotive designer's task is not to create the most attractive, or fastest, or quietest, or most fuel-efficient car, but rather a car that satisfies sufficiently the design preferences and functional and quality expectations of its target customer, offers fuel efficiency within a desired target range, and can be brought to market on time at an acceptable profit. This need to optimize the balance of industrial design, performance factors, cost and process efficiencies is a continual challenge for the ground transportation industry and many other industries, as they seek to develop new and innovative products.

Vehicle development is a complex, multi-disciplinary process. The trend toward shorter model lives and increased model proliferation has led to increasing numbers of new vehicle design programs being launched simultaneously. This trend has been compounded by the global demand for more efficient and lower emission modes of transportation. These combined global trends are forcing radical changes in the vehicle development process.

The new vehicle development process consists of three primary phases: design, engineering and manufacturing. In each of these phases, the ability to predict or verify how a new design will behave under real world conditions is a critical factor in the manufacturer's efforts to improve the design, performance and profitability of the new vehicle.

Design. In this stage, designers in the studio develop the design of a new vehicle. They begin the process of bringing an innovative new vehicle to life within a set of packaging, powertrain, fuel efficiency and other attributes that must be met. For decades, physical systems such as clay models and wind tunnels have been the primary predictive tool used in the design and development process. As a result, our customers spend a significant portion of their research and development budgets, which we estimate (based upon our analysis of publicly available industry data and information provided to us by our customers) to be as much as 10% to 15%, or over \$10 billion per year, on physical prototypes, test facilities and related travel and staff costs. These physical experimental methods are not only expensive and inefficient, but also limited in their ability to provide accurate predictive information early in the design process, when such information is most valuable.

Engineering. This is the longest phase of the development process, where all of the details and functionality of the vehicle are developed, achieved and verified in order to ensure that the product design can be realized within the specified constraints. Each new vehicle design needs to be evaluated across numerous performance attributes involving many engineering disciplines, including aerodynamics, powertrain, thermal management, climate control and aeroacoustics. In this stage, experimental testing of full scale functional prototypes in wind tunnels, climate chambers and test tracks is used extensively to verify that the vehicle will meet required parameters for performance and quality. Physical testing of this type is expensive and cumbersome and also occurs late in the development process, when design changes are more difficult and expensive to implement. For example, track testing can only be performed near the end of the development process when working pre-production prototypes become available, and even then its accuracy can be affected by prototype quality, variable environmental conditions and the difficulty of measuring multiple performance attributes on a moving vehicle.

As a result of these intrinsic limitations of physical experimentation as a method of verification, performance deficiencies such as a component that overheats, or a side mirror that produces excessive wind noise, may not be discovered until late in the vehicle development process. At this point, a problem that could have been detected earlier may require corrective changes that add cost and weight to the vehicle, compromising program performance goals and profitability.

Manufacturing. At multiple points throughout each phase of the vehicle development process, key attributes of the new vehicle design must be certified as meeting the manufacturer's program requirements, in a process known as signoff, before the design can be released to the next stage in the process. Achieving each of these signoffs is a key milestone in the vehicle development process. For example, one of the largest costs associated with designing and engineering a new car, truck or machine is that of the tooling for the manufacturing process. The large stamping presses used to create many of the body components and sheet metal can each cost tens to hundreds of millions of dollars and the lead times in this process are long, requiring the design of a new vehicle to be "released to tooling" more than a year before production can commence.

Design verification using physical experimentation has been the principal method of obtaining these signoffs. However, testing of a limited number of functional prototypes may not identify all potential performance problems. Manufacturing variability can cause significant performance differences. Gaps of even a few millimeters due to variations in the manufacturing process or surface changes due to oxidization of high temperature components can materially alter the vehicle's acoustic or thermal performance. The inability to predict and account for such effects earlier in the development process, before the final design is released to tooling, can lead to quality and reliability issues and higher warranty costs.

In recent years, computer-aided technology has played an increasingly important role in the product development process. Digital modeling and simulation have emerged as enabling technologies to aid in the design, analysis, and manufacture of products. Digital simulation-driven design is not only faster and more economical in providing feedback than experimental approaches such as the construction of prototypes or wind tunnel testing, but in many industries it is now approaching a level of accuracy and robustness that is sufficient to utilize its predictions for design decisions.

Several technology factors are facilitating the emergence of simulation-driven design:

- increasing adoption of computer-aided design, or CAD, and product lifecycle management, or PLM, software by manufacturers and their suppliers;
- continually decreasing cost of computing power, transforming computing power from a scarce resource that is conserved to one that is inexpensive and readily available; and
- increasingly powerful tools for visualization and computer generated imaging: the ability to see eases the ability to understand and communicate—key attributes in a very complex design process with many interdependent silos.

In many industries, a critical element of optimizing product design is predicting how an object or mechanical system will interact with air, water or other fluids. Software-based simulation tools using computational fluid dynamics, or CFD, methods have been commercially available for over 40 years. In this approach, numerical methods are utilized to provide approximate solutions to the Navier-Stokes equations, which statistically describe the behavior of a fluid in motion. The limitations of this approach are not with the Navier-Stokes equations but with the numerical techniques utilized to find approximate solutions to them for industrial problems. Most existing fluid dynamics solutions are limited in their ability to analyze highly complex geometries and predict the flow at a high level of accuracy within practical time frames.

Technology, Products and Applications

Technology

PowerFLOW is built on our proprietary Digital Physics technology, which is based on an extended implementation of the lattice Boltzmann method that we have developed over two decades. PowerFLOW differs from competing CFD technology in fundamental ways that make our simulations more useful to our customers. PowerFLOW simulations are:

- *transient*: can simulate time-dependent phenomena such as turbulent flows;
- *stable*: reliable even when used to analyze complex geometries; and
- *accurate*: validation studies by us and our customers demonstrate that digital simulations utilizing PowerFLOW are comparable in accuracy to the physical tests that they replace, and in some cases, are more accurate.

PowerFLOW leverages the fact that it is a transient solver with high three-dimensional resolution and low dissipation. This allows PowerFLOW to directly simulate large unpredictable turbulent scales. PowerFLOW uses turbulence theory to model only where it is valid and directly simulates the rest.

These combined attributes of PowerFLOW's underlying technology enable us to bring simulation solutions to new levels of accuracy and robustness that have not been possible before.

Customers use our PowerFLOW simulation solutions to enhance the performance of their products, reduce product development costs and improve the efficiency of their product development processes. Our technology and products are catalyzing a disruptive change in how our customers design, engineer and optimize their products. Simulation-driven design enabled by PowerFLOW makes predictive information available earlier in the design process, permitting deeper exploration of the design space, with iterative simulations providing insight into how new concepts can improve the design. For example, our customers in the ground transportation market tell us that this has enabled them to improve their development processes by replacing physical prototype testing at many stages of the vehicle development process with robust, detailed and accurate digital simulations. This allows the final prototype stage to be primarily one of confirmation rather than discovery.

Products

We provide our solutions through our core product, PowerFLOW and a suite of related software products. We surround that technology with more than 20 years of technical know-how and vertical industry expertise, which we employ to deliver applications tailored specifically to the requirements of the ground transportation market. In cooperation with our customers, we also generate validation data to substantiate the accuracy of the resulting PowerFLOW simulations in comparison to physical test results and identify best practices for implementation that enable customers to solve with confidence their engineering and design problems.

Our solution focus starts with our powerful and patented fluids simulation technology. Combining our inherently transient simulation engine with a single detailed geometric model allows the software to connect with other physics algorithms to address the requirements of many engineering disciplines. The same geometric model can be used for aerodynamic, aeroacoustic and thermal simulations, saving engineering time and expense and allowing for cross-disciplinary studies.

The simulation process occurs in three stages: simulation preparation, the simulation itself and analysis of the simulation results. In the simulation preparation stage, our software tools are used to prepare a digital geometric model, often based on CAD design data, for use in our PowerFLOW simulation engine. The user then selects the environmental and operating conditions, such as highway speed with a cross wind or slow towing hill climb, under which to evaluate the digital model. The simulation stage involves the use of our PowerFLOW simulation engine to model complex fluid flows and other phenomena as they relate to the digital model and test conditions prepared in the simulation preparation. Lastly, simulation analysis involves the use of visualization and other tools to gain insights into the data generated by the simulation step. These results can be used to further refine the digital model for use in later iterations of the simulation step. In the analysis phase, we offer sophisticated optimization algorithms that assist in searching within specified constraints for improved designs, something that is not possible in physical test environments.

The complete PowerFLOW software suite includes the simulation engine and grid generation engine (also called the discretizer), along with complementary pre- and post-processing software products. The software is delivered in a client/server architecture, or through our cloud-based offering, ExaCLOUD. When utilizing the client server architecture, the computationally intensive discretization and simulation processes generally run on a centralized multi-processor simulation server, while the front-end applications for simulation preparation and back-end applications for post-processing analysis run on desktop clients that interact with the central server. With the ExaCLOUD solution, many of the client features and functions are accessed through a web browser, and all of the complex computational intensive processes are run in our hosted high performance computing environment.

The main driver of our revenue is customers’ usage of simulation hours on the simulation server, to which we provide access under capacity-based term licenses. Customers usually purchase PowerFLOW simulation capacity under one-year licenses, or in some cases multi-year licenses, that provide the customer either with dedicated access to a specified number of processor cores throughout the contract term or with a block of “simulation hours” that may be used at any time but expire if not used by the end of the contract year. We separately license the client software that interfaces with our PowerFLOW simulation server for a fixed annual fee, based on the number of concurrent users. Our ExaCLOUD solution offers customers a range of options to address their simulation demands, including a “pay-as-you-use” model and an option to purchase a block of simulation capacity upfront to be used over a defined period.

Our product suite includes the following principal offerings:

Simulation preparation	Key Features
	<i>The desktop-based simulation preparation products described below enable users to quickly and easily import complex geometric models and incorporate them into a PowerFLOW simulation case and to manipulate and modify these digital models, and evaluate potential design improvements.</i>
PowerDELTA with PowerCLAY	Streamlines and automates the simulation model preparation process by applying proven concepts of parametric feature modeling and history tree model management to the process of simulation model creation and update. PowerDELTA now includes PowerCLAY morphing technology that allows users to perform real-time, studio-quality morphing of models for easy design optimization. Design data in most major CAD and mesh formats are supported—even at varying levels of quality.
PowerCASE	Efficiently creates, edits, and compiles a complete PowerFLOW simulation case. The compiled case file controls the construction of the simulation grid produced by the discretizer (PowerFLOW’s grid generator), which in turn drives the actual simulation.
Simulation Server	Key Features
	<i>The server-based simulation products described below form the core of our PowerFLOW suite. These products utilize our proprietary Digital Physics technology to accurately model complex fluid flows and other phenomena.</i>
PowerFLOW	Our core product, which incorporates all of our proprietary Digital Physics technology, efficiently and accurately simulates fluid dynamics, even on models with extreme geometric complexity.
PowerTHERM	Couples with PowerFLOW to accurately predict surface temperatures and heat fluxes generated by thermal radiation and conduction.
PowerCOOL	Couples with PowerFLOW to accurately calculate the heat transfer between a heat exchanger and the cooling airflow while seamlessly integrating into the PowerFLOW work flow.

The desktop-based simulation analysis products described below allow users to efficiently visualize and evaluate the simulation data generated by PowerFLOW. Using this information and our simulation preparation tools, users can quickly and easily refine their design and prepare a new simulation case for additional testing.

PowerINSIGHT

A graphical user interface that offers a library of user configurable templates and generates comparative results, allowing users to interactively browse these results to gain insight into their simulation and automatically generate reports in a variety of formats, including PowerPoint.

PowerVIZ

High-performance visualization and analysis application used for processing simulation results from PowerFLOW and spectral analysis results from PowerACOUSTICS. Provides a wide variety of tools to perform detailed analyses, a fast, intuitive, and interactive user interface, and the ability to quickly process large data sets. Different visualization techniques can be combined within the same image to explore simulation data.

PowerACOUSTICS

Enables accurate pressure fluctuation prediction, noise source identification, wind noise transmission to interior, and sound package parameter study capabilities.

PowerREALITY

Enables photo-realistic engineering and design communication of PowerFLOW simulation results.

**ExaCLOUD
Simulation Platform**

ExaCLOUD provides PowerFLOW simulation preparation and analysis functionality through a browser rather than through client software. It also manages the simulation server in the cloud.

Applications

Our goal is to promote simulation-based design techniques throughout each of the core disciplines and departments within our customers' organizations, which, for customers in the ground transportation market, include aerodynamics, thermal management, aeroacoustics, climate control and powertrain. Each of these departments is responsible for a particular aspect of the design of a vehicle and tradeoffs often must be made between the priorities of these departments. For example, a design change made to improve the aerodynamic properties of a vehicle may negatively affect the thermal management or aeroacoustic properties of the vehicle. Our customers tell us that by providing timely and accurate insights about the performance of alternative design approaches early in the product development cycle, our products allow their engineers to better understand these tradeoffs and thereby reduce the likelihood of expensive redesigns or engineering fixes to remedy problems that might otherwise only be discovered late in the product development program. Toward that end, our applications management teams dedicated to each of these disciplines seek opportunities to apply our core fluids and related physics simulation engines to address new target problems. In this process, we develop new solutions, which can then be marketed to other customers, all of which drives simulation consumption.

Our integrated suite of aerodynamic, thermal management and aeroacoustics simulation capabilities provides a single solution for critical fluid dynamics problems, and our interactive visualization capabilities enable rapid iteration of design modifications and simulations. Our case preparation tools and user interface shorten set-up time, and reduce the need for personnel with extensive CAD expertise. Our product architecture and user interface facilitate sharing of data and collaboration across departments, design teams and engineers.

In each phase of the vehicle development process, PowerFLOW simulations can be utilized to improve the product in its performance attributes, development costs, product costs, manufacturing costs, and warranty and other product lifecycle costs.

For example:

- *Aerodynamics:* Reducing aerodynamic drag is a core focus for every transportation system. Aerodynamic drag can be responsible for over half of the fuel consumption of a vehicle at high speeds. Our solutions allow our customers to rapidly explore the design space, visualizing the impact of design modifications in real time, to find opportunities to reduce drag while maintaining their styling themes.
- *Heat Transfer:* Braking systems have stringent heat dissipation requirements, as temperature affects braking effectiveness. Manufacturers have historically used physical mock-ups of the wheel and braking system to evaluate braking performance and cool down time. Because these test rigs do not include the full car they cannot reproduce the effect of air flow from the vehicle body and chassis that surround the braking system. Thus, actual performance is discovered only when functional prototypes become available. With PowerFLOW, full thermal braking simulations can be performed early in the design cycle, based on the proposed geometry of the entire vehicle.

- *Acoustics:* PowerFLOW can accurately predict the air-driven turbulent fluctuations that agitate the glass panel on a vehicle's front passenger door and produce wind noise, an indicator of quality and comfort that vehicle manufacturers work extremely hard to reduce. Our PowerACOUSTICS module enables engineers to model the transmission of these noise sources through the door and glass structures to predict the noise in the interior of the vehicle. Historically, our customers could evaluate interior wind noise only by wind tunnel testing, which was possible only when functional prototypes became available late in the development process. PowerFLOW's ability to predict interior noise early in the product development workflow enables acoustic engineers to analyze and address wind noise issues early in the development process, when small but critical design changes can more easily be made.

By adding functionality that addresses phenomena such as thermal radiation or acoustic transmission, we have been able to provide our customers with solutions that extend beyond our initial fluid dynamics focus. As we continue to add new applications solutions to broaden the range of simulation problems that PowerFLOW can address, adoption of our technology has spread from the automotive market that was our initial focus to other segments of the ground transportation industry. For example, the addition of thermal management capability to our product in fiscal year 2008 enabled us to offer simulation solutions to the truck and off-highway equipment markets, in which thermal management is a significant challenge. In fiscal year 2017, these market segments accounted for approximately 18% of our total revenue. Deployment of each new functional solution results in increased utilization of simulation capacity by our customers, which leads to new license purchases and revenue. We believe the customer base for most of these applications remains only partially deployed. As our customers gradually alter their development processes to take more advantage of the digital development methods we are enabling, we seek opportunities to cross-sell our products to new engineering groups within our existing customers.

One of the earliest applications of our technology in the automotive market was the modeling of aerodynamic drag, a key concern of engineers in our customers' aerodynamics departments. However, the same core transient simulation engine that enables the prediction of drag can also be extended to address the problems of a different group of engineers in the same company who are responsible for the vehicle's soiling and water management attributes. This group works to understand and mitigate the amount of soil (road dirt, brake dust or salt) that accumulates on critical components such as doors, side glass and mirrors, for safety and quality reasons. Similarly, for off highway equipment, accumulation of particles in the air intake and cooling systems can significantly affect performance. All of this can now be studied and optimized digitally using PowerFLOW early in the design process where changes are less costly to implement.

We provide solutions to some of the most difficult simulation problems that are faced by our customers. Relying upon deep knowledge of our vertical market, our applications management teams work with design and engineering groups in various disciplines within our customers' organizations to identify their needs, to develop solutions using our technology to meet their specific requirements, and to assist the customer in validating and implementing these solutions. We leverage the key attributes of our proprietary technology and more than 20 years of industry experience to provide answers that previously have been unattainable through traditional physical testing or existing CFD methods.

As our customers have recognized the predictive accuracy of our simulation solutions, they are beginning to adopt verification of design behavior by means of PowerFLOW simulation as an alternative to physical experimentation as a basis for critical design signoffs. Similar approaches are now being utilized by regulatory agencies. For example, greenhouse gas regulations issued by the United States Environmental Protection Agency and National Highway Traffic Safety Administration for medium and heavy-duty vehicles permit aerodynamic drag (a key value used to determine compliance with CO₂ emission standards) to be certified by means of fluid dynamics simulation.

The result is a significant increase in the usefulness and cost-effectiveness of simulation. The use of PowerFLOW can accelerate design cycles, enhance innovation and provide flexibility to experiment with designs that might otherwise be thought too costly, reducing research and development and manufacturing costs and improving product reliability and quality. We believe that our proprietary solution has the potential to transform the product development process not only in our current target markets but in other markets that face similar problems, including the chemical processing, architecture, engineering and construction, power generation, biomedical and electronics industries.

Business Strengths

We believe that the following key business strengths will assist us in taking advantage of the opportunities we are pursuing:

- *Customer engagement model.* Delivering value to our customers and ensuring their success is at the core of our business philosophy. Our dedicated field and applications management teams engage with our customers in long-term relationships focused on identifying problems we can help them solve, demonstrating the value of our solutions and ensuring that the customer achieves maximum benefit from them. In this process we interact continuously with our customers to improve our software and services and add new solutions, and at the same time deepen our knowledge of the industry. Our

customer-centric focus, significant domain expertise and integrated accurate solutions have led to the establishment of stable and growing customer relationships. In addition, our close cooperation and communication with our customers provides us with invaluable information concerning the accuracy, usefulness and cost-effectiveness of our products.

- *Solutions focus and deep domain expertise.* Our customers value our core intellectual property and technology, but they equally value our focus on surrounding that technology with know-how and best practices that enable them to solve their engineering and design problems. In order to deliver upon our solutions-oriented approach, we have built a strong applications management team that understands our customers' problems and translates this understanding into product development roadmaps and deployment best practices.
- *Expertise in our targeted vertical market.* A natural outcome of our solutions focus is our vertical industry focus. We have concentrated initially on the ground transportation market, where management of aerodynamic drag and related fuel efficiency, heat transfer and aerodynamic noise are critical problems in product design. This focus has enabled us to deliver solutions that are based on a deep understanding of our customers' fluid flow simulation problems and provide highly differentiated solutions that are difficult or impossible for our competitors to replicate. It has also enabled us to focus our sales and marketing efforts on a large market that we believe remains significantly underpenetrated.
- *Predictable business model.* Our revenue is derived primarily from the sale of access to our simulation software, under annual capacity-based licenses for which we typically invoice our customers at the beginning of the license term. The principal driver of our revenue growth is customers' increased consumption of simulation capacity, as our solutions penetrate more deeply and widely across their organizations. The recurring nature of our revenues, as customers annually renew or increase their simulation capacity, provides high visibility into future performance. On average over the last three fiscal years, more than 49% of our annual revenue was attributable to contractual commitments that were in place at the beginning of the fiscal year.
- *Proprietary and protected intellectual property.* Our core and layered technologies, including our Digital Physics approach, are protected by patent coverage and non-disclosed trade secrets which provide a strong competitive advantage over alternative solutions. Our senior scientific and engineering leadership, some of whom have been with Exa since its founding, pioneered our proprietary approach to fluid dynamics simulation and have developed extensive know-how relating both to the fundamental underlying physics as well as its application to the specific problems our customers face.

Growth Strategy

Our goal is to become the global leader in digital simulation solutions in the target markets we serve. Our strategies to achieve this objective include:

- *Deepen deployment in our existing customer base.* We remain underpenetrated at our existing customers and see significant growth potential as they migrate their product development processes based on physical test and prototypes to digital-based approaches. Once our PowerFLOW technology has been adopted in one area of a customer's organization, we seek opportunities to expand to other disciplines and departments. Our core technology and product architecture, which use the same geometric model for aerodynamic, thermal management and aeroacoustic analysis, along with our intuitive user interface and case preparation tools, ease deployment and facilitate sharing of data and collaboration across departments. We continue to expand our suite of applications, further expanding the deployment opportunities in our installed base.
- *Add new customers in the ground transportation market.* We believe that the addressable market in ground transportation is significantly underpenetrated and there continue to be favorable regulatory and market dynamics pushing the industry to improve fuel efficiency and emissions and enhance the performance and quality of its products. Hundreds of passenger car, highway truck and off-highway vehicle manufacturers and their suppliers worldwide represent potential new customers for us. We intend to continue to add sales personnel to capture this opportunity. We have launched the ExaCLOUD platform to extend our product capabilities into customer segments that were previously difficult to reach. With a low barrier of entry and access to significant computing capacity, we see this platform as an important part of our growth outside of our larger, core customer base.
- *Enable additional applications and solutions.* We will continue to expand the applications we offer so that our customers can meet an expanded set of needs through simulation-driven design. Our applications management teams will identify new applications for which our customers need solutions, and develop product requirements, validation data, best practices and deployment assistance for our customers, with the outcome of broadening the use of our simulation services and increased consumption of simulation capacity. Expanded applications will lead to increased demand as different applications require unique simulations due to evaluating the vehicle under different operating conditions or configurations.

- *Penetrate new geographies.* We have a strong presence in North America, Europe and Japan and Korea. Ground transportation customers in Brazil, India and China are rapidly maturing their design and engineering capabilities as they work to become global competitors. We have been working to expand our presence and business in these geographies, and will continue to do so.
- *Expand on our recent entries into the oil and gas production and aerospace markets and explore new vertical markets.* We believe that our solution has the potential to transform the design process not only in the ground transportation market but in other markets that face similar problems. Our core technology is extendable to applications beyond those required in the ground transportation market. For example, we continue to invest in and develop our aerospace vertical business with domain expertise and new applications. We have built a customer base of both airframe and supply chain manufacturers. In addition, we recently launched and licensed our commercial product for use in the oil and gas production industry. We believe that our solutions would be also of value for use in the chemical processing, architecture, engineering and construction, power generation, biomedical, electronics, chemical and power generation markets, as well.
- *Selectively pursue strategic acquisitions.* There are many fragmented and complementary software products and technologies that would enable us to expand our product and solutions offering, increase the value delivered to our customers, and expand our customer base. We plan to selectively pursue opportunities to acquire complementary business, products or technologies.

Sales and Marketing

We sell our products and services primarily through our field team of 185 persons in the United States, United Kingdom, France, Germany, Italy, Japan, Korea and China at January 31, 2017, including 30 sales executives, 28 technical account managers assigned to our most deployed customers, a worldwide staff of 117 applications engineers and 3 marketing coordinators. We also sell our products and services through a distributor in India and through a sales agent in Brazil.

Our sales executives and applications engineering teams are based near our customers to enable quick, efficient, local time zone and language support. Our sales team is responsible for building a long-term, value-driven relationship with our customers. They also have access to our global technical resources to carry out and deliver project-based engagements. They utilize these project resources strategically to enable customers over time to deploy our solutions independently.

To introduce new customers to our simulation solutions, we typically perform fixed-price projects that include simulations accessed via our ExaCLOUD facilities, along with engineering and consulting services. Initial projects typically focus on a specific real problem in an active development program and are executed over the course of a few weeks or months. We may perform one or a series of projects, in which our applications management teams work with the design and engineering groups in various disciplines within our customers' organizations to identify their needs and to assist the customer in validating and implementing our solution. As we work with the customer in project-based mode, we work towards building a value proposition that supports a license sale.

Once our PowerFLOW technology has been adopted in one area of a customer's organization, we seek opportunities to expand to other disciplines and departments. We are currently marginally deployed at many of our current customers and see significant growth potential from existing customers. For example, a manufacturer of luxury automobiles initially implemented our aerodynamic simulation solutions for use in styling evaluation and optimization. Over the course of our multi-year relationship with this customer, the range of our solutions deployed by the customer has expanded to include thermal management (including convective drive train cooling, brake cooling, underhood temperatures and climate control solutions) as well as aeroacoustics, resulting in an increase in simulation capacity purchased by this customer by a factor of over 50 times over a period of six years.

Customers usually purchase PowerFLOW simulation capacity under one-year licenses that provide the customer either with dedicated access to a specified number of processor cores throughout the contract year or with a block of "simulation hours" that may be used at any time but expire if not used by the end of the contract year. As an illustration, a highway truck customer, based on a new truck design program, may estimate that it will run a minimum of 200 aerodynamic simulations in its next fiscal year. A typical highway truck aerodynamics simulation requires 3,000 simulation-hours each. Thus, this customer will require a minimum of 600,000 simulation-hours.

Simulation capacity may be purchased as software-only, to be run on the customer's own computer hardware, or provided in the form of software-as-a-service, via our hosted ExaCLOUD offerings. We provide our ExaCLOUD services primarily through data centers in Piscataway, New Jersey and Ashburn, Virginia, operated by IBM and Equinix, respectively. We separately license the front-end and back-end applications software that interfaces with our simulation server software for a fixed annual fee, based on the number of concurrent users at the customer. As customers continue to use our solutions and deploy them more widely within their organizations, their consumption of our simulation services typically increases. We offer volume discounts based on the annual volume of simulation capacity ordered.

Research and Development

Our product development activities are carried out by our research and development organization, which at January 31, 2017 encompassed 122 persons, including 26 scientists engaged in basic research in fluid dynamics, 51 software engineers, 35 applications management personnel and 10 product management personnel. Our senior research and development scientists include leaders in the field of fluid dynamics who have pioneered the use of the lattice Boltzmann method. Our applications management teams, which are organized around the core engineering disciplines and departments within our customers' organizations, perform a critical role in establishing and executing our product development roadmap, by identifying customer needs, developing product requirements and working with customers to implement and improve our solutions. Examples of our current research and development activities include basic research to improve the capabilities and performance of our core fluids simulation engine, which is currently in its fifth generation, as well as the expansion of our solutions to address new simulation applications, for example, modeling of moving geometries such as rotating machinery. Our total expenditures on research and development were \$24.3 million, or 33.5% of total revenues in fiscal year 2017, \$24.1 million, or 36.9% of total revenues in fiscal year 2016 and \$21.8 million, or 35.5% of total revenues in fiscal year 2015. In order to maintain and extend our technology leadership and competitive position, we intend to continue to devote significant effort to our research and development activities.

Intellectual Property

We regard our software as proprietary. Our strategy is to rely on a combination of copyright, patent, trademark and trade secret laws in the United States and other jurisdictions, and to rely on license and confidentiality agreements, and software security measures to further protect our proprietary technology and brand. The laws of some countries in which our products are licensed may not protect our intellectual property rights to the same extent as the laws of the United States.

We have obtained or applied for patent protection with respect to some of our core intellectual property, but generally do not rely on patents as a principal means of protecting intellectual property. As of January 31, 2017, we owned twelve patents issued in the United States and had nine pending patent applications in the United States.

We conduct business under our trademarks and use trademarks on some of our products. We believe that having distinctive marks may be an important factor in marketing our products. As of January 31, 2017, we had thirteen active trademark registrations in the United States and a limited subset in selected other countries. Although we have a foreign trademark registration program for selected marks, the laws of many countries protect trademarks solely on the basis of registration and we may not be able to register or use such marks in each foreign country in which we seek registration. We monitor use of our trademarks and intend to enforce our rights to our trademarks.

We rely on trade secrets to protect substantial portions of our technology. We generally seek to protect these trade secrets by entering into non-disclosure agreements with our employees and customers, and historically have restricted access to our software source code and licenses, which we regard as proprietary information. In these cases, we rely on non-disclosure and other contractual provisions to protect our proprietary rights. Trade secrets may be difficult to protect, and it is possible that parties may breach their confidentiality agreements with us.

In addition to the protections described above, our software is protected by United States and international copyright laws. We license our software products utilizing a combination of web-based and hard copy license terms and forms. We rely primarily on "click-wrap" licenses. The enforceability of these types of agreements under the laws of some jurisdictions is uncertain.

The steps we have taken to protect our proprietary rights may not be adequate to deter misappropriation of our technology or independent development by others of technologies that are substantially equivalent or superior to our technology. Any misappropriation of our technology or development of competitive technologies could harm our business. We could incur substantial costs in protecting and enforcing our intellectual property rights.

Executive Officers and Directors

The following table sets forth information with respect to our executive officers as of March 22, 2017:

Name	Age	Position
Stephen A. Remondi	51	Chief Executive Officer, President, Director
Richard F. Gilbody	57	Chief Financial Officer
Jean-Paul Roux	53	Senior Vice President of Global Aerospace and European Operations
Hudong Chen, Ph.D.	60	Chief Scientist, Senior Vice President of Physics
James Hoch	52	Senior Vice President of Software Development
Suresh Sundaram, Ph.D.	51	Senior Vice President of Products and Marketing
Joel F. Dube	49	Vice President of Finance, Principal Accounting Officer

Stephen A. Remondi co-founded Exa Corporation in 1991 and has held the positions of Chief Executive Officer and President since 1999. Prior to 1999, Mr. Remondi held numerous positions within Exa, including Vice President of Applications Development and Business Development. In that role, Mr. Remondi was responsible for the development of the PowerFLOW product and management of Exa's strategic customer partnerships. Prior to founding Exa, Mr. Remondi held various engineering and engineering management positions at Alliant Computer Systems Corporation and Data General Corporation. Mr. Remondi has a B.S. in Electrical & Computer Engineering from Tufts University and an M.B.A. from Bentley College. We believe that Mr. Remondi's educational background in engineering and management, his professional experience as an engineer and executive, and his extensive knowledge of our company's history and culture, its products, technology and personnel, and its markets and customers, qualify him to serve as a member of our board of directors.

Richard F. Gilbody joined Exa in June 2014 and brings over 30 years of finance and operations experience. Prior to joining Exa, Mr. Gilbody served from 2011 to 2013 as Chief Financial Officer, Chief Operating Officer and Board member at Agencyport Software. From 2000 to 2011, Mr. Gilbody held senior finance and operating executive positions at IBM, including Vice President of the Business Analytics Division, and at Cognos Corporation, as President of Cognos Americas and Senior Vice President of Finance and Operations. Mr. Gilbody holds both a Bachelor of Science and a Masters in Business Administration from Boston College.

Jean-Paul Roux joined Exa in 2001 as our managing director for Southern and Western Europe and has been Senior Vice President of Global Aerospace and European Operations since 2014. In April 2003 Mr. Roux served as our Vice President of European Operations. Prior to joining Exa, Mr. Roux was Managing Director of Tecnomatix UK, a provider of product lifecycle management software, and its Scandinavian subsidiary. Mr. Roux has extensive experience selling software solutions to engineers in the manufacturing, electronics, automotive, aerospace and off-highway equipment industries. Mr. Roux holds a language degree from Catholic University and a business degree from Ecole Supérieure de Commerce in Grenoble, France.

Dr. Hudong Chen joined Exa in 1993 and has been our Chief Scientist since 1997 and Senior Vice President of Physics since 2014. From 2000 to 2014, Dr. Chen served as our Vice President of Physics. Prior to his tenure at Exa, Dr. Chen was a visiting assistant physics professor at Dartmouth College and a postdoctoral fellow at Los Alamos National Laboratory. Dr. Chen has a Ph.D. in Physics from Dartmouth College, a M.S. in Physics from the College of William and Mary, and a B.S. in Physics from Fudan University in China. Dr. Chen is known for his pioneering work in lattice Boltzmann methods as well as contributions in turbulence and kinetic theory. Dr. Chen has been a Fellow of the American Physical Society since 2000.

James Hoch joined Exa in 1993 and has been our Senior Vice President of Software Development since 2014. From 1999, when he rejoined the Company, to 2014, Mr. Hoch served as our Vice President of Software Development. Prior to joining Exa, Mr. Hoch was the lead architect on several research parallel computer systems and related compiler projects at Sandia National Laboratories. Mr. Hoch was also chief architect at Maker Communications, a developer of network communications processors, from October 1998 to July 1999. Mr. Hoch has extensive experience in compiler technology and parallel computing and holds both M.S. and B.S. degrees from Purdue University in Computer and Electrical Engineering.

Suresh Sundaram, Ph.D. joined Exa in August 2016 as our Senior Vice President of Products and Marketing. Prior to joining Exa, Dr. Sundaram held a variety of leadership roles at Aspen Technology, Inc., a global provider of optimization software solutions, including Vice President of Sales Operations from March 2016 to July 2016, Vice President of Product Management from November 2013 to February 2016, Senior Vice President of Marketing from July 2011 to October 2013, and Senior Vice President of Products and Market Strategy from July 2007 to June 2011. Dr. Sundaram is a member of the board of directors of GSE Systems, Inc., a provider of real-time high-fidelity simulation systems and training solutions to the power and process

industries. Dr. Sundaram holds M.S. and Ph.D. degrees in Chemical Engineering from MIT, a B.S. in Chemical Engineering from IIT Bombay, and has completed the Executive Education program from the Harvard Business School.

Joel F. Dube joined Exa in August 2016 and has over 18 years of finance and accounting leadership and experience. Mr. Dube joined Exa from Juniper Pharmaceuticals, Inc., a women's health therapeutic company, where he was Vice President and Corporate Controller from September 2015 to July 2016. Prior to his tenure with Juniper, Mr. Dube was Vice President and Corporate Controller at CRA International, Inc., a global consulting firm, from June 2007 to September 2015 and held various accounting roles in organizations across the technology, manufacturing and public accounting sectors. Mr. Dube earned his Bachelor of Science degree in Business Administration from the University of Lowell, a postgraduate certification in Accountancy from Bentley College and is a Certified Public Accountant in New Hampshire.

Item 1A. Risk Factors

You should carefully consider the risks and uncertainties described below, together with the information included elsewhere in this Annual Report on Form 10-K and other documents we file with the SEC. The risks and uncertainties described below are those that we have identified as material, but are not the only risks and uncertainties facing us. Our business is also subject to general risks and uncertainties that affect many other companies, such as overall U.S. and non-U.S. economic and industry conditions including a global economic slowdown, geopolitical events, changes in laws or accounting rules, fluctuations in interest and exchange rates, terrorism, international conflicts, major health concerns, natural disasters or other disruptions of expected economic and business conditions. Additional risks and uncertainties not currently known to us or that we currently believe are immaterial also may impair our business operations and liquidity.

Risks Related to Our Business and Industry

We depend on our PowerFLOW suite of simulation solutions for substantially all of our revenue, and our business will suffer if demand for, or usage of, PowerFLOW declines.

We derive substantially all of our revenue from subscription licenses to use our PowerFLOW software suite and related services. We expect revenue from PowerFLOW to continue to account for substantially all of our revenue for the foreseeable future. If demand for, or usage of, PowerFLOW declines for any reason, our revenue would decline and our operating results would suffer.

Economic downturns that affect the ground transportation industry may adversely affect our revenues and operating results.

We derive a substantial majority of our total revenue from companies in the ground transportation industry. Accordingly, our future success depends upon the continued demand for digital simulation software and services by companies in this industry. The ground transportation industry and the other manufacturing industries that we serve, or may expand into, periodically experience economic downturns that can adversely affect our business. For example, we were negatively impacted by the suspension or postponement of vehicle development programs by our customers in response to the 2008 financial crisis and resulting recession, which significantly affected the automotive industry. Furthermore, political unrest, terrorist attacks, other increased global hostilities and natural disasters have, at times, contributed to widespread uncertainty and speculation in the world financial markets. The impact of events of this kind may be exacerbated by other economic factors, such as increased operating and manufacturing costs due to rising global energy prices, the tightening of the financial and credit markets, changes or reduced clarity in regulatory requirements, and by changes in commercial and consumer preferences and spending habits. In the future, such cyclical trends and economic factors may adversely affect our business by reducing customer capital expenditures, extending design cycles and reducing our revenue and, ultimately, our results of operations. In addition, manufacturers in the ground transportation market tend to adhere to a technology choice for long periods, possibly an entire product development cycle. As a result, a lost opportunity with a given customer may not again become a new opportunity for several years or projects may be delayed if development of a new product is put on hold or terminated.

Adverse changes in the economy and global economic and political uncertainty may also cause delays and reductions in information technology spending by our customers and a deterioration of the markets for our products and services. If adverse economic conditions occur, we would likely experience reductions, delays and postponements of customer purchases that will negatively impact our revenue and operating results.

In the past, worldwide economic downturns and pricing pressures have led to reorganizations of companies in the automotive industry. Such reorganizations have in the past caused delays and reductions in capital and operating expenditures including for products and services like ours. In addition, a consolidation or reorganization affecting a significant customer could result in discontinuation of use by the acquired company of our simulation solutions, if the acquiring company has not adopted our technology or prefers other methods of design verification. Domestic and foreign economic conditions or any other factors that result in reduced spending on new product development by companies in the automotive industry could harm our operating results in the future.

Significant changes in U.S. policy could have an adverse effect on us.

Changes in or uncertainty regarding future U.S. social, political, regulatory and economic conditions or laws and policies governing energy policy, foreign trade, manufacturing, and development and investment in the territories and countries where we or our customers operate could adversely affect our operating results and our business.

Our success depends on continued adoption of digital simulation in our target markets, and if potential customers are unwilling to adopt our digital simulation technologies to augment or replace their traditional physical methods of design validation and testing, our opportunities for future revenue growth may be limited.

Most of our customers and potential customers have historically tested their product designs using experimental methods such as wind tunnels and road tests. Manufacturers often have made substantial investments in physical test facilities and associated staff and infrastructure and have accumulated many years of experience in using these methods. For organizational, cultural, financial or other reasons, potential customers may be reluctant to reduce their reliance on physical experimental methods as the primary means to validate and test their designs. If we are not successful in overcoming these obstacles by demonstrating to potential customers that the results of digital simulation using PowerFLOW can be delivered in a timely and cost effective manner and are sufficiently reliable to be used as the basis of design decisions, they may not adopt, or may delay broader adoption of, our digital simulation technology, which could limit our opportunities for revenue growth and adversely affect our business.

We are dependent on a small number of significant customers for a substantial portion of our revenues.

A significant portion of our revenues is derived from renewals by our existing customers of annual licenses to use PowerFLOW, and in any fiscal period, a large portion of our revenue is typically attributable to a small number of significant customers. In fiscal years 2017, 2016 and 2015, approximately 61%, 64% and 58% of our revenue, respectively, was attributable to our ten largest customers in the aggregate. One customer accounted for approximately 10%, 12% and 10% of our revenue in fiscal years 2017, 2016 and 2015, respectively. In the past we have experienced revenue fluctuations within this concentrated account base due to customer internal budget constraints, corporate policy mandates regarding use of simulation tools, experimentation with alternative solutions and consolidation of independent companies or divisions. Due to the concentration of revenue in a small number of customers, a significant reduction in usage of PowerFLOW by any of these customers, or the non-renewal of their annual licenses, due to the cancellation or postponement of vehicle development programs or for any other reason, could have a materially adverse effect on our results of operations.

Because our business relies heavily on foreign operations and revenues, changes in foreign currency exchange rates and our need to convert currencies may negatively affect our financial condition and results of operations.

Because most of our international sales are denominated in the currency of the country where the purchaser is located, as we continue to expand our direct sales presence in international regions, our accounts receivable and payment obligations denominated in foreign currencies continues to increase. As a result, increases or decreases in the value of the U.S. dollar relative to foreign currencies may affect our financial position, results of operations and cash flow. Currently, our largest exposures to foreign exchange rates exist with respect to the euro and the Japanese yen. We do not currently hedge our exposure to fluctuations in foreign exchange rates. Any hedging policies we may implement in the future may not be successful, and the cost of those hedging techniques may have a significant negative impact on our operating results. Changes in the relative values of currencies occur regularly and, in some circumstances, may have a significant impact on our operating results. We cannot predict with any certainty changes in foreign currency exchange rates or the degree to which we can cost-effectively mitigate these risks.

Our lengthy and technical sales cycle makes it difficult for us to predict the timing of our entry into new license agreements.

The development of our business relationship with a potential customer can be a lengthy process, typically spanning three to six months or longer. Our strategy is to engage initially with new customers, or with new engineering groups within existing customers, by performing fixed-price projects. Once new customers are familiar with the capabilities of our products, they generally, but not always, transition to a license-based model for access to PowerFLOW. Because the license fees for our products can be substantial and the internal process changes necessary for a customer to implement our solution can be significant, the software license sales cycle may involve multiple divisions within a potential customer's organization and multiple layers of management. Due to the length and complicated nature of our sales cycle, predicting the fiscal period in which a new license agreement will be entered into, if at all, is difficult. Delays in booking new license agreements could cause our quarterly revenues to fall substantially below our expectations and those of public market analysts and investors. Delays in sales could cause significant shortfalls in our revenue and operating results for any particular period.

Competition from software offered by current competitors and new market entrants, as well from internally developed solutions by our customers, could adversely affect our ability to sell our software products and related services and could result in pressure to price our products in a manner that reduces our profitability.

The market for digital simulation software is characterized by vigorous competition. We consider the primary competition to adoption of our solutions to be our customers' continued use of physical prototypes and test facilities. We also encounter competition from companies that provide multi-function digital simulation software that is used for various purposes in the ground transportation industry and elsewhere, primarily Siemens, with its products STAR-CD and STAR-CCM+, and ANSYS, with its products Fluent and CFX. Siemens has a strong presence in the automotive market, and offers capabilities in certain areas where we do not currently focus, such as combustion. ANSYS offers a suite of digital simulation software that includes many applications that we do not address, such as structural mechanics and electromagnetism, which it markets to a broad spectrum of industries. We also compete against open source software such as OpenFOAM that includes computational fluid dynamics capabilities. In addition, some of our customers have attempted, and may in the future attempt, to develop digital simulation software solutions internally.

In most of our existing and potential new accounts, products such as these are already in use for a variety of purposes, and likely will remain so. Our ability to further penetrate the ground transportation market will therefore depend on our ability to demonstrate that our solutions deliver economic value in the form of significant process and cost improvements that competing products are unable to provide. As we expand our offerings into other markets, we may face competition from the same competitors as well as from companies that we have not typically competed against in the past. Many of our current and potential competitors have greater financial, technical, marketing, service and other resources than we have and may expand into our markets by acquiring other companies or otherwise. As a result, these companies may be able to offer lower prices, additional products or services, or other incentives that we cannot match or offer. We have experienced existing and potential customers perceiving the cost of our solution as being higher than that of our competitors' products or an internally developed solution. This perception could become an obstacle to wider adoption of our simulation solutions, result in pressure to reduce our prices or change our capacity-based pricing model, or prompt our customers to explore lower cost solutions. We may not be able to compete successfully against current or future competitors or internally developed solutions and competitive pressures may materially adversely affect our business, financial condition and operating results.

Our success depends in part on our ability to develop and introduce new and enhanced products and we may not be able to timely develop new and enhanced products to satisfy changes in demand.

Our success depends in part on our ability to develop and market new and enhanced solutions on a timely basis. Successful product development and marketing depends on numerous factors, including our ability to anticipate customer requirements, changes in technology, our ability to differentiate our products and solutions from those of our competitors, and market acceptance. Enterprises are requiring their application software vendors to provide greater levels of functionality and broader product offerings. Moreover, our industry is characterized by rapidly changing technologies and evolving industry standards and operating platforms. We may not be able to develop and market new or enhanced solutions in a timely or cost-effective manner or to develop and introduce products that satisfy customer requirements. Our products also may not achieve market acceptance or correctly anticipate technological changes. In particular, a critical component of our growth strategy is to increase the penetration and expansion of PowerFLOW and our related products with our existing customers in the ground transportation market. We may not be successful in developing and marketing, on a timely basis, new products or product enhancements, or adequately addressing the changing needs of our customers and potential customers or successfully increasing the penetration of PowerFLOW and our related products in our existing, or any other, markets.

Changes in or interpretations of financial accounting standards may have an adverse impact on our reported results of operations.

Changes in or interpretations of financial accounting standards may have an adverse impact on our reported results of operations. We prepare our consolidated financial statements in conformity with generally accepted accounting principles in the United States, or GAAP. These principles are subject to interpretation by the Securities and Exchange Commission, or SEC, and various bodies formed to interpret and create accounting standards. It is possible that future requirements, including the recently released guidance related to revenue recognition (ASU 2014-09, *Revenue from Contracts with Customers: Topic 606*), could change our current application of GAAP, resulting in a material adverse impact on our reported results of operations or financial position, and may even affect our reporting of transactions completed before the change is effective.

New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. Changes to existing rules or the question of current practices may harm our operating results or the way we conduct our business.

The significant cost of deep deployment of our solutions could deter their wider adoption.

Under our capacity-based license model, license fees are based on simulation capacity, purchased on an annual basis. Increased utilization, or continued usage after the expiration of the license term, requires the purchase of additional simulation capacity. As customers increase their reliance on our digital simulation solutions and deploy them more widely within their organizations, their consumption of our simulation capacity increases. For example, one customer has expanded the annual simulation capacity it purchases from us by a factor of over 50 times over a period of six years. At some point, the significant cost of implementing our solutions pervasively throughout their organizations under a capacity-based licensing model may deter our customers from more widely adopting our solutions, which could limit our prospects for growth.

We may not be able to obtain or maintain necessary licenses of third-party technology on commercially reasonable terms, or at all, which could delay product sales and development and adversely impact product quality.

We have incorporated third-party licensed technology into certain of our products. We anticipate that we are also likely to need to license additional technology from third parties in connection with the development of new products or product enhancements in the future. Third-party licenses may not be available to us on commercially reasonable terms, or at all. The inability to retain any third-party licenses required in our current products or to obtain any new third-party licenses to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and delay or prevent us from making these products or enhancements, any of which could seriously harm the competitive position of our products.

Our success in penetrating new vertical markets will depend, in part, on our ability to develop a deep understanding of the challenges facing potential customers in those markets.

We have historically concentrated our development efforts primarily on the ground transportation market. While we anticipate that the substantial majority of our revenues will continue to be derived from the ground transportation market for the foreseeable future, in order to achieve our long-term growth goals, we will need to penetrate additional vertical markets, such as the aerospace, oil and gas production, chemical processing, architecture and construction, power generation, biomedical and electronics industries. Our success in the ground transportation market depends on our deep understanding of the design processes utilized by our customers in that market. In order to penetrate new vertical markets, we will need to develop a similar understanding of the design processes, and associated technical difficulties, utilized by participants in those markets. Developing this level of understanding has been and will continue to be a time consuming and potentially expensive process, and we may not be successful. We will also need to demonstrate to potential customers that PowerFLOW and our other products and services can provide digital simulation solutions that compare favorably to physical testing methods as well as the offerings by our competitors with respect to cost, accuracy, set-up time and ease of use. If we fail to penetrate these new vertical markets, our revenue may grow at a slower rate than we anticipate and our financial condition could suffer.

If there are interruptions or delays in our ExaCLOUD services due to third-party error, our own error or the occurrence of unforeseeable events, delivery of our solutions and the use of our service could become impaired, which could harm our relationships with customers and subject us to liability.

We provide ExaCLOUD services primarily through data centers operated by IBM and Equinix under agreements pursuant to which these companies provide the data center hosting infrastructures. Design and mechanical errors, spikes in usage volume and failure to follow system protocols and procedures could cause our systems, or those in the data centers, to fail, resulting in interruptions in our service. Interruptions or delays in our ExaCLOUD service could result from the termination of our arrangement with either IBM or Equinix, third-party error, our own error, natural disasters or security breaches. Such interruptions or delays, whether accidental or willful, could harm our relationships with customers, damage our brand and reputation, divert our employees' attention, reduce our revenue, subject us to liability, cause us to issue credits or cause customers to fail to renew their subscriptions, any of which could adversely affect our business, financial condition and results of operations.

If our security measures, or those of third-party providers for our ExaCLOUD services are breached and unauthorized access is obtained to client data, clients may curtail or stop their use of our solutions, which could harm our business, financial condition and results of operations.

Our ExaCLOUD services involve the storage and transmission of confidential information of customers, including their design data. We may also in the course of our service engagements have access to such confidential customer information. If our, or our third-party service providers', security measures were ever breached as a result of employee error, malfeasance or otherwise, and, as a result, an unauthorized party obtained access to this confidential data, our reputation could be damaged, our business could suffer and we could incur significant liability. Techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not discovered until launched against a target. As a result, we and our third-party providers may be unable to anticipate

these techniques or to implement adequate preventative measures. If an actual or perceived breach of our or our third-party suppliers' security occurs, the market perception of our ExaCLOUD services could be harmed and we could lose sales and clients.

Defects or errors in our products could harm our reputation, impair our ability to sell our products and result in significant costs to us.

PowerFLOW and the other products that we offer are complex and, despite extensive testing and quality control, may contain undetected errors or failures when first introduced or as new versions are released. We have not suffered significant harm from any defects or errors to date, but we have from time to time found defects in our products and we may discover additional defects in the future. We may not find errors in new or enhanced products before the products are released and such errors may not be discovered by us or our customers until after the products have been implemented. We have in the past issued and may in the future need to issue corrective releases of our products to remedy defects and errors. Any of these problems may result in the loss of or delay in customer acceptance and sales of our products, which could have a material, adverse effect on our business, financial position, results of operations and cash flows.

We could be subject to significant expenses and damages because of liability claims related to our products and services.

Our customers' reliance on our digital simulation solutions or project-based services in their vehicle design processes may entail the risk of product liability claims and associated damages, and our software products and services could give rise to warranty and other claims. As we expand into new market segments outside the ground transportation industry, the risk of product liability exposure may increase. Any errors, defects, performance problems or other failure of our software could result in significant liability to us for damages or for violations of environmental, safety and other laws and regulations. Our agreements with our customers generally contain provisions designed to limit our exposure to potential product liability claims. It is possible, however, that the limitation of liability provisions in our agreements may not be effective as a result of federal, foreign, state or local laws or ordinances or unfavorable judicial decisions. A substantial product liability judgment against us could materially and adversely harm our operating results and financial condition. Even if our software is not at fault, a product liability claim brought against us could be time consuming, costly to defend and harmful to our operations. In addition, although we carry general liability insurance, our current insurance coverage may be insufficient to protect us from all liability that may be imposed under these types of claims.

Seasonal variations in the purchasing patterns of our customers may lead to fluctuations in the timing of our cash flows.

We have experienced and expect to continue to experience seasonal variations in the timing of customers' purchases of our software products. Many customers make purchase decisions based on their fiscal year budgets, which often coincide with the calendar year, except for our customers in Japan. These seasonal trends materially affect the timing of our cash flows, as license fees become due at the time the license term commences. As a result, customer orders for new and renewal licenses have been concentrated in the fourth quarter of our fiscal year, and our cash flows from operations have been highest in the first quarter of the succeeding fiscal year.

Declines in new software license sales or in the rate of renewal of our software may not be fully reflected in our current period operating results and could lead to future revenue shortfalls that could affect our results of operations.

Because our software products are sold pursuant to annual subscription agreements and we recognize revenue from these subscriptions over the term of the agreement, downturns or upturns in new or renewal licenses may not be fully reflected in our current period operating results. We do not intend to report or disclose our bookings or invoices on a current basis. If our new and renewal license purchases in any period decline or fail to grow at a rate consistent with our historical trends, particularly in the fourth quarter of our fiscal year, when a disproportionate percentage of our new license and renewal sales typically occur, our revenue in future periods could fall short of analysts' expectations which, in turn, could adversely affect the price of our common stock.

Our cost structure is relatively fixed in the short term, which makes it difficult to reduce our expenses quickly in response to declines in revenue or revenue growth.

Most of our expenses, such as those associated with headcount and facilities, are relatively fixed and can be difficult to reduce in the short term. Our expense levels are based in part on our expectations regarding future revenue levels. As a result, if revenue for a particular quarter is below our expectations, our expenses for that quarter may constitute a larger percentage of our operating budget than we planned, causing a disproportionate effect on our expected results of operations and profitability for that quarter.

If we are unable to manage our expected growth, our performance may suffer.

Our business has grown rapidly, and if we are successful in executing our business strategy, this growth will continue as we expand our offerings in the ground transportation market and seek to penetrate new vertical markets. We will need to continue to

expand our managerial, operational, financial and other systems and resources to manage our operations, continue our research and development activities, increase our sales force and expand project-based services by increasing our field application engineers and worldwide support staff. It is possible that our management, finance, development personnel, systems and facilities currently in place may not be adequate to support this future growth. Our need to effectively manage our operations, growth and products requires that we continue to develop more robust business processes and improve our systems and procedures in each of these areas and to attract and retain sufficient numbers of talented employees. We may be unable to successfully implement these tasks on a larger scale and, accordingly, may not achieve our research, development and growth goals.

Our business could be adversely affected if we are unable to attract, integrate and retain key personnel.

Our success in the highly competitive digital simulation market depends largely on our ability to attract, integrate and retain highly skilled technical, managerial, consulting, sales and marketing personnel globally. Competition for these personnel in our industry is intense. We may not be able to continue to attract and retain the appropriately qualified, highly skilled employees necessary for the development of our products and services and the growth of our business, or to replace such personnel who leave our employ in the future. Our ability to attract and retain these resources may also be impacted by the immigration policies of a number of countries. The loss of services of any of our key personnel, the inability to retain and attract qualified personnel in the future, or delays in hiring required personnel, particularly scientific, product development and applications management personnel, could make it difficult to meet key objectives, such as timely and effective product introductions, penetration and expansion into existing accounts and growth in our share of the domestic and international digital simulation market.

We may expand by acquiring or investing in other companies, which may divert our management's attention, result in additional dilution to our stockholders and consume resources that are necessary to sustain our business.

Although we have no agreements or commitments for any material acquisitions, our business strategy may in the future include acquiring complementary services, technologies or businesses. We also may enter into relationships with other businesses to expand our service offerings or our ability to provide service in foreign jurisdictions, which could involve preferred or exclusive licenses, developing channels of distribution or investments in other companies. Negotiating these transactions can be time-consuming, difficult and expensive, and our ability to close these transactions may often be subject to approvals that are beyond our control. Consequently, these transactions, even if undertaken and announced, may not close.

An acquisition, investment or business relationship may result in unforeseen operating difficulties and expenditures. In particular, we may encounter difficulties assimilating or integrating the businesses, technologies, products, personnel or operations of the acquired companies, particularly if the key personnel of the acquired company choose not to work for us, the company's technology is not easily adapted to work with ours or we have difficulty retaining the customers of any acquired business due to changes in management or otherwise. Acquisitions may also disrupt our business, divert our resources and require significant management attention that would otherwise be available for development of our business. Moreover, the anticipated benefits of any acquisition, investment or business relationship may not be realized or we may be exposed to unknown liabilities. Our acquisitions may not be successfully integrated or any such acquisitions may not otherwise be successful. If our acquisitions are unsuccessful for any reason, our business may be harmed and the value of your investment may decline.

We sell our products and services internationally and are subject to various risks relating to these international activities; if we fail to manage our international operations effectively, our business, financial condition and results of operations could be adversely affected.

International sales of PowerFLOW and our related products and services are important to our growth and profitability. In the fiscal year ended January 31, 2017, 74% of our revenue was attributable to sales in international markets, and at January 31, 2017, we had 15 offices in eight countries. By doing business in international markets, we are exposed to risks separate and distinct from those we face in our domestic operations, and if we are unable to manage the various risks associated with supporting our international sales and service efforts effectively, the growth and profitability of our business may be adversely affected.

Engaging in international business inherently involves a number of other difficulties and risks, including:

- changes in foreign currency exchange rates;
- changes in a specific country's or region's political or economic conditions, particularly in emerging markets;
- burdens of complying with a wide variety of foreign customs, laws and regulations;
- burdens of complying with United States laws regulating international business activities, including the United States Foreign Corrupt Practices Act and economic and trade sanctions regimes;
- natural disasters or outbreaks of infectious diseases affecting the regions in which our customers operate;

- unexpected changes in tariffs or trade protection measures;
- import or export licensing requirements and other restrictions on technology imports and exports;
- potentially negative consequences from changes in foreign government regulations, tax laws and regulatory requirements;
- laws and business practices favoring local companies;
- difficulty in managing a geographically dispersed workforce in compliance with diverse local laws and customs;
- difficulties and costs of staffing and managing foreign operations;
- disproportionate management attention or company resources;
- changes in diplomatic and trade relationships;
- international terrorism and anti-American sentiment;
- possible future limitations on the ownership of foreign businesses;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- longer accounts receivable payment cycles;
- less effective protection of intellectual property; and
- the challenges of handling legal disputes in foreign jurisdictions.

Our exposure to each of these risks may increase our costs, impair our ability to market and sell our products and require significant management attention. Our business, financial position, results of operations and cash flows may be materially adversely affected by any of these risks.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of amounts that have been accrued.

We are subject to income taxes in both the United States and various foreign jurisdictions, and we may take certain income tax positions on our tax returns that tax authorities may disagree with. When necessary, we provide reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of our tax liabilities involves the application of complex tax regulations to our global operations in many jurisdictions. Therefore, any dispute with any tax authority may result in a payment that is materially different from our current estimate of the tax liabilities associated with our returns.

Changes in tax laws or tax rulings could materially impact our effective tax rate. In the United States, there are several proposals to reform corporate tax law that are currently under consideration. These proposals include reducing the corporate statutory tax rate, broadening the corporate tax base through the elimination or reduction of deductions, exclusions and credits, implementing a territorial regime of taxation, limiting the ability of United States corporations to deduct interest expense associated with offshore earnings, modifying the foreign tax credit rules, and reducing the ability to defer United States tax on offshore earnings. These or other changes in the United States tax laws could increase our effective tax rate which would affect our profitability.

Our ability to use our net operating loss carryforwards may be subject to limitation.

Under Section 382 of the Internal Revenue Code of 1986, as amended, substantial changes in our ownership may limit the amount of net operating loss carryforwards that could be utilized annually in the future to offset our taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of our company of more than 50% within a three-year period. Any such annual limitation may significantly reduce the utilization of our net operating loss carryforwards before they expire. Future transactions in our common stock could trigger an ownership change for purposes of Section 382, which could limit the amount of net operating loss carryforwards and other attributes that could be utilized annually in the future to offset our taxable income, if any. Any such limitation, whether as the result of sales of common stock by our existing stockholders or sales of common stock by us, could have a material adverse effect on our results of operations in future years.

During the first quarter of fiscal year 2015, management determined that we experienced an ownership change for purposes of Section 382. This ownership change resulted in annual limitations to the amount of net operating loss carryforwards that can be utilized to offset future taxable income, if any, at the federal level. The annual limit is approximately \$16.8 million for each of fiscal years 2016 through 2019, \$8.0 million for fiscal year 2020 and \$6.4 million for each fiscal year thereafter. The ownership change also resulted in the loss of our ability to utilize approximately \$0.8 million of state net operating loss carryforwards, credits and other state attributes, which resulted in a write-off of the \$0.8 million of state deferred tax assets during the first quarter of fiscal year 2015.

We may need substantial additional funding and we may be unable to raise capital when needed, which could force us to delay, reduce or eliminate our product development programs or commercialization efforts.

We believe that our cash on hand and cash flows from operations will be sufficient to meet our anticipated cash requirements for at least the next twelve months. However, our actual capital requirements will depend on many factors, many of which are outside our control, including:

- future revenue generation;
- future operating expenses, including planned increases in our research and development, sales and marketing and general and administrative expenses;
- the cost of filing and prosecuting patent applications and defending and enforcing our patent and other intellectual property rights;
- the cost of defending, in litigation or otherwise, any claims that we infringe third party intellectual property rights;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

Historically, we have financed our operations and internal growth primarily through private placements of our equity securities and debt and through our initial public offering. We cannot be certain that additional public or private financing will be available in amounts acceptable to us, or at all. If we raise additional funds by issuing equity securities, you may experience dilution. Furthermore, any new securities we issue may have rights, preferences and privileges superior to our common stock. Debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders.

Risks Related to Our Intellectual Property

We may not be able to adequately protect our intellectual property rights in internally developed software and other materials and efforts to protect them may be costly.

Our ability to compete effectively is dependent in part upon our ability to protect our intellectual property rights in our software and other materials that we have developed internally. While we hold issued patents and pending patent applications covering certain elements of our technology, these patents, and, more generally, existing patent laws, may not provide adequate protection for portions of the technology that are important to our business. In addition, our pending patent applications may not result in issued patents. We have largely relied on copyright, trade secret and, to a lesser extent, trademark laws, as well as generally relying on confidentiality procedures and agreements with our employees, consultants, customers and vendors, to control access to, and distribution of, technology, software, documentation and other confidential information. Despite these precautions, it may be possible for a third party to copy or otherwise obtain, use or distribute our technology without authorization. If this were to occur, we could lose revenue as a result of competition from products infringing or misappropriating our technology and intellectual property and we may be required to initiate litigation to protect our proprietary rights and market position.

United States patent, copyright and trade secret laws offer us only limited protection and the laws of some foreign countries do not protect proprietary rights to the same extent. Accordingly, defense of our proprietary technology may become an increasingly important issue as we continue to expand our operations and product development into countries that provide a lower level of intellectual property protection than the United States. Policing unauthorized use of our technology is difficult and the steps we take may not prevent misappropriation of the technology we rely on. If competitors are able to use our technology without recourse, our ability to compete would be harmed and our business would be materially and adversely affected.

We may elect to initiate litigation in the future to enforce or protect our proprietary rights or to determine the validity and scope of the rights of others. That litigation may not be ultimately successful and could result in substantial costs to us, the reduction or loss in intellectual property protection for our technology, the diversion of our management attention and harm to our reputation, any of which could materially and adversely affect our business and results of operations.

Assertions by any other third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation and expensive licenses.

The software and technology industries are characterized by frequent litigation based on allegations of infringement or other violations of patents, copyrights, trademarks, trade secrets or other intellectual property rights. We cannot be certain that our products and services do not infringe the intellectual property rights of third parties. Additionally, because our software is integrated with our

customers' business processes and other software applications, third parties may bring claims of infringement against us, as well as our customers and other software suppliers, if the cause of the alleged infringement cannot be easily determined. Although we believe that our intellectual property rights are sufficient to allow us to market our products and services without incurring liability to third parties, third parties may bring claims of infringement or misappropriation against us. No third party has pursued claims of this type against us to date. However, such claims of alleged infringement of intellectual property rights of third parties could be asserted against us in the future. We cannot be sure that we would prevail against any such as erted claim. In addition to possible claims with respect to our proprietary information, some of our products contain technology developed by and licensed from third parties and we may likewise be susceptible to infringement or misappropriation claims with respect to these third party technologies.

Claims of alleged infringement of third party intellectual property rights may have a material adverse effect on our business. Any intellectual property rights claim made against us or our customers, with or without merit, could be time-consuming, expensive to litigate or settle, and could divert management attention and financial resources. An adverse determination could prevent us from offering our products or services to our customers and may require that we procure or develop substitute products or services that do not infringe. Claims of intellectual property infringement also might require us to enter into costly royalty or license agreements. We may be unable to obtain royalty or license agreements on terms acceptable to us or at all. Furthermore, many of our license agreements require us to indemnify our customers for certain third-party intellectual property infringement claims, which could increase our costs as a result of defending such claims and may require that we pay damages if there were an adverse ruling related to any such claims. Even if we are not a party to any litigation between a customer and a third party, an adverse outcome in any such litigation could make it more difficult for us to defend our intellectual property in any subsequent litigation in which we are a named party. Moreover, such infringement claims may harm our relationships with our existing customers and may deter future customers from subscribing to our services on acceptable terms, if at all.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of employees' former employers.

We could in the future be subject to claims that we or our employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of our employees' former employers. Litigation may be necessary to defend against these claims. If we fail in defending against such claims, a court could order us to pay substantial damages and prohibit us from using technologies or features that are essential to our products if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. In addition, we may lose valuable intellectual property rights or personnel. A loss of key personnel or their work product could hamper or prevent our ability to develop, market and support potential products or product enhancements, which could severely harm our business. Even if we are successful in defending against these claims, such litigation could result in substantial costs and be a distraction to management.

Our use of open source software could impose limitations on our ability to provide our services, which could adversely affect our financial condition and operating results.

We utilize open source software in our products. The use and distribution of open source software can lead to greater risks than the use of third-party commercial software, as open source software does not come with warranties or other contractual protections regarding infringement claims or the quality of the code. From time to time parties have asserted claims against companies that distribute or use open source software in their products and services, asserting that open source software infringes their intellectual property rights. We could be subject to suits by parties claiming infringement of intellectual property rights with respect to what we believe to be open source software. In such event, we could be required to seek licenses from third parties in order to continue using such software or offering certain of our services or to discontinue the use of such software or the sale of our affected services in the event we could not obtain such licenses, any of which could adversely affect our business, operating results and financial condition. In addition, if we combine our proprietary software with open source software in a certain manner, we could, under some of the open source licenses, be required to release the source code of our proprietary software.

Risks Related Ownership of Our Common Stock

The JOBS Act allows us to postpone the date by which we must comply with certain laws and regulations intended to protect investors and to reduce the amount of information we provide in our reports filed with the SEC, which could undermine investor confidence in our company and adversely affect the market price of our common stock.

The JOBS Act, which was enacted in April 2012, is intended to reduce the regulatory burden on “emerging growth companies.” As defined in the JOBS Act, a public company whose initial public offering of common equity securities occurred after December 8, 2011 and whose annual gross revenues are less than \$1.0 billion will, in general, qualify as an emerging growth company until the earliest of:

- the last day of its fiscal year following the fifth anniversary of the date of its initial public offering of common equity securities;
- the last day of its fiscal year in which it has annual gross revenue of \$1.0 billion or more;
- the date on which it has, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt; and
- the date on which it is deemed to be a “large accelerated filer,” which will occur at such time as the company (a) has an aggregate worldwide market value of common equity securities held by non-affiliates of \$700 million or more as of the last business day of its most recently completed second fiscal quarter, (b) has been required to file annual and quarterly reports under the Securities Exchange Act of 1934 for a period of at least 12 months, and (c) has filed at least one annual report pursuant to the Securities Act of 1934.

Under this definition, we will cease to be an emerging growth company as of January 31, 2018.

The JOBS Act provides that, so long as a company qualifies as an emerging growth company, it will, among other things:

- be exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that its independent registered public accounting firm provide an attestation report on the effectiveness of its internal control over financial reporting;
- be exempt from the “say on pay” provisions (requiring a non-binding stockholder vote to approve compensation of certain executive officers) and the “say on golden parachute” provisions (requiring a non-binding stockholder vote to approve golden parachute arrangements for certain executive officers in connection with mergers and certain other business combinations) of the Dodd-Frank Act and certain disclosure requirements of the Dodd-Frank Act relating to compensation of its chief executive officer;
- be permitted to omit the detailed compensation discussion and analysis from proxy statements and reports filed under the Securities Exchange Act of 1934 and instead provide a reduced level of disclosure concerning executive compensation; and
- be exempt from any rules that may be adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotation or a supplement to the auditor’s report on the financial statements.

We have irrevocably elected not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 102(b) of the JOBS Act. We currently intend to take advantage of some or all of the reduced regulatory and reporting requirements that will be available to us so long as we qualify as an “emerging growth company”. Among other things, this means that our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an emerging growth company, which may increase the risk that weaknesses or deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as an emerging growth company, we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company. As a result, investor confidence in our company and the market price of our common stock may be adversely affected.

We expect that the significant legal, accounting and other expenses we incur as a public company will increase once we are no longer an “emerging growth company”.

Our revenue, operating results and gross margin have historically fluctuated significantly from quarter to quarter, and we expect they will continue to do so, which could cause the trading price of our stock to decline.

Our quarterly revenue and results of operations have fluctuated in the past and may do so in the future as a result of a variety of factors, many of which are outside of our control. If our quarterly revenue or results of operations fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Fluctuations in our results of operations may be due to a number of factors, including, but not limited to, those listed below and identified throughout this “Risk Factors” section in this Annual Report on Form 10-K:

- our recognition of project revenues during the quarter in which services are completed, rather than ratably over the period of performance of services;
- our ability to retain and increase sales to existing customers and attract new customers;
- changes in the volume and mix of products sold in a particular quarter;
- seasonality of our business cycle, given that our cash flows from operating activities are typically significantly higher in our first fiscal quarter;
- our policy of expensing sales commissions on license and project sales;
- the timing and success of new product introductions or upgrades by us or our competitors;
- changes in our pricing policies or those of our competitors;
- failure to achieve anticipated levels of customer acceptance of our existing or new applications or platform changes;
- failure to expand the utilization of PowerFLOW in our customer base or to penetrate new customers and market segments;
- unexpected outcomes of matters relating to litigation;
- unanticipated changes in tax rates and tax laws;
- failure to effectively protect our intellectual property, especially in developing countries;
- failure to successfully integrate acquired businesses and technologies;
- renegotiation or termination of royalty or intellectual property arrangements;
- unanticipated impact of accounting for technology acquisitions, if any;
- general economic conditions, particularly in countries where we derive a significant portion of our revenue;
- greater than anticipated expenses or a failure to maintain cost controls;
- competition, including entry into the market by new competitors and new product offerings by existing competitors;
- the amount and timing of expenditures related to expanding our operations, research and development, or introducing new products;
- fluctuations in foreign currency exchange rates;
- changes in the licensing or payment terms for our products and services; and
- the purchasing and budgeting cycles of our customers.

Customers may choose not to renew annual licenses, resulting in reduced revenue to us. In addition, customers may wish to negotiate renewals of licenses on terms and conditions that require us to change the way we recognize revenue under our existing revenue recognition practices at the time of such renewal with such customers. Any such changes could result in a material adverse effect on our results.

We expect that the factors listed above and other risks discussed in this report will continue to affect our operating results for the foreseeable future. Because of the factors listed above and other risks discussed in this report, we believe that period-to-period comparisons of our operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment in our common stock will depend on the appreciation in the price of our common stock.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings to fund our future growth and do not expect to declare or pay any dividend on shares of our common stock in the foreseeable future. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock appreciates and you sell your shares at a price above your cost. The price of our common stock may not appreciate in value or ever exceed the price that you paid for shares of our common stock.

Anti-takeover provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions in Delaware law, might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions that could have the effect of rendering more difficult or discouraging an acquisition deemed undesirable by our board of directors. Our corporate governance documents include provisions:

- providing for three classes of directors with the term of office of one class expiring each year, commonly referred to as a staggered board;
- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call and bring business before special meetings and to take action by written consent in lieu of a meeting;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our board of directors;
- controlling the procedures for the conduct and scheduling of board and stockholder meetings;
- limiting the determination of the number of directors on our board and the filling of vacancies or newly created seats on the board to our board of directors then in office; and providing that directors may be removed by stockholders only for cause.

These provisions, alone or together, could delay hostile takeovers and changes in control or changes in our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal offices occupy approximately 44,000 square feet of leased office space in Burlington, Massachusetts pursuant to a lease agreement that expires in March 2023. We also maintain sales, support and applications management offices in Livonia, Michigan; Brisbane, California; Worcestershire, UK; Paris, France; Stuttgart, Germany; Munich, Germany; Ciriè, Italy; Yokohama, Japan; Seoul, Korea; and Shanghai, China. Additionally, we lease a total of approximately 2,300 square feet of space at two high performance computing data centers in Piscataway, New Jersey and Ashburn, Virginia. We believe that our current facilities are suitable and adequate to meet our current needs. We intend to add new facilities or expand existing facilities as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

We are not a party to any pending legal proceedings. However, because of the nature of our business, we may be subject at any particular time to lawsuits or other claims arising in the ordinary course of our business, and we expect that this will continue to be the case in the future

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Price Range of Common Stock

Our common stock trades on the NASDAQ Global Market tier of the NASDAQ Stock Market under the symbol: "EXA." The following table sets forth the high and low sales prices per share of our common stock, for each quarter during fiscal years 2017 and 2016.

	2017		2016	
	High	Low	High	Low
First Quarter	\$ 13.90	\$ 10.02	\$ 12.34	\$ 9.53
Second Quarter	15.36	11.12	12.00	10.34
Third Quarter	16.74	13.47	11.48	9.02
Fourth Quarter	16.60	13.01	11.85	9.51

On March 17, 2017, the last reported sale price on the NASDAQ Global Market for our common stock was \$13.80 per share. On March 17, 2017, there were approximately 70 holders of record of our common stock. This number does not include stockholders for whom our shares were held in "nominee" or "street" name.

Dividend Policy

We have never paid or declared any cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, outstanding indebtedness and plans for expansion and restrictions imposed by lenders, if any.

Unregistered Sales of Equity Securities

For information regarding securities authorized for issuance under our equity compensation plans, see Part III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

Comparative Stock Performance

The following stock performance graph compares the cumulative total return to stockholders for our common stock for the period commencing June 26, 2012 (the date on which our common stock commenced trading on the NASDAQ Global Market) and ended January 31, 2017 against the cumulative total return of the NASDAQ Composite Index, the Russell 2000 Index and the NASDAQ Computer and Data Processing Index. The calculation of total cumulative returns assumes a \$100 investment in our common stock, the NASDAQ Composite Index, the Russell 2000 Index and the NASDAQ Computer and Data Processing Index, and assumes reinvestment of all dividends, if any. The historical information set forth below is not necessarily indicative of future performance.



	6/28/12	1/13	7/13	1/14	7/14	1/15	4/15	7/15	10/15	1/16	4/16	7/16	10/16	1/17
Exa Corporation	100.00	102.14	116.84	143.67	94.18	103.57	115.71	114.08	98.06	109.90	133.16	148.98	142.86	158.16
NASDAQ Composite	100.00	107.66	125.73	144.02	154.59	164.30	175.10	182.03	179.29	164.04	170.33	184.18	185.13	200.57
Russell 2000	100.00	113.91	132.90	144.70	144.27	151.09	158.69	161.63	152.16	136.10	149.26	161.63	158.41	181.73
NASDAQ Computer & Data Processing	100.00	107.23	127.01	157.71	167.25	164.35	179.73	187.36	200.52	199.94	200.41	217.33	226.12	236.23

Use of Proceeds

On July 3, 2012, we completed the initial public offering of our common stock pursuant to our Registration Statement on Form S-1 (File No. 333-176019), which was declared effective by the Securities and Exchange Commission on June 27, 2012. The underwriters for the offering were Stifel Nicolaus & Company, Incorporated, Robert W. Baird & Co. Incorporated, Canaccord Genuity Inc. and Needham & Company, LLC. We did not use any of the net proceeds from this offering for working capital or any other purposes during the three months ended January 31, 2017.

ITEM 6: SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements and related notes in Part IV, Item 8 of this Annual Report on Form 10-K and with our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of this Annual Report on Form 10-K.

Our selected consolidated statement of operations data for the fiscal years ended January 31, 2017, 2016 and 2015 and our selected consolidated balance sheet data as of January 31, 2017 and 2016 are derived from our audited consolidated financial statements included elsewhere in this report. Our selected consolidated statement of operations data for the fiscal years ended January 31, 2014 and 2013 and selected consolidated balance sheet data as of January 31, 2015, 2014 and 2013 are derived from our audited consolidated financial statements which have not been included in this report.

Selected Consolidated Financial Data

	Year Ended January 31,				
	2017	2016 (1)	2015 (2)	2014 (3)	2013 (4)
(in thousands, except share and per share data)					
Statement of Operations Data					
Total revenue	\$ 72,580	\$ 65,447	\$ 61,431	\$ 54,514	\$ 48,868
Operating income (loss)	396	(2,726)	(2,447)	(122)	1,960
Net (loss) income	\$ (1,132)	\$ (4,807)	\$ (19,157)	\$ (709)	\$ 763
(Loss) earnings per share—basic	\$ (0.08)	\$ (0.33)	\$ (1.39)	\$ (0.05)	\$ 0.10
Weighted average shares—basic	14,779,117	14,520,834	13,735,897	13,326,883	7,929,364
(Loss) earnings per share—diluted	\$ (0.08)	\$ (0.33)	\$ (1.39)	\$ (0.05)	\$ 0.06
Weighted average shares—diluted	14,779,117	14,520,834	13,735,897	13,326,883	12,896,487
Balance Sheet Data					
Cash and cash equivalents	\$ 24,552	\$ 27,649	\$ 21,785	\$ 28,753	\$ 30,716
Total current assets	51,709	63,428	52,345	60,319	61,464
Total assets	69,074	79,021	63,053	84,849	84,070
Long-term debt and capital leases, net of current portion	914	2,549	1,602	2,695	7,842
Stockholders’ equity	\$ 19,174	\$ 17,487	\$ 18,891	\$ 35,533	\$ 34,771

- (1) The Balance Sheet Data table above reflects the early adoption of Accounting Standards Update (“ASU”) 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes*. We adopted this ASU prospectively as of January 31, 2016 and the adoption resulted in all current deferred tax assets and liabilities being reported as non-current as of January 31, 2016, while prior period deferred tax assets and liabilities were not adjusted. We determined that the adoption did not have a material effect on our financial position or results of operations.
- (2) Through the three months ended April 30, 2014, our results reflected a three-year cumulative loss position in the United States; prior thereto, our historical results reflected a three-year cumulative profit. As a result of our three-year cumulative loss position in the United States at April 30, 2014 and our projected cumulative loss position as a result of continued investment in the growth of our business, our management concluded that it was no longer more likely than not that our deferred tax assets would be realized, and that a valuation allowance was necessary in full amount of our United States net deferred tax assets. Accordingly, our income tax provision for fiscal year 2015 includes a \$14.4 million non-cash charge to record a valuation allowance against our United States net deferred tax assets and a \$0.8 million non-cash write-off of state deferred taxes. For further information, see Note 12 of the notes to our consolidated financial statements, which are included elsewhere in this report.
- (3) On May 31, 2013 we repaid, with available cash on hand, all outstanding obligations under our Loan and Security Agreement dated January 28, 2011 with Gold Hill Capital 2008, L.P. and Massachusetts Capital Resource Company. The repayment amount included \$6.9 million of outstanding principal, \$0.1 million of accrued interest and \$0.2 million of deferred origination fees that were accrued for in other long-term liabilities. In addition, in accordance with the agreement terms, we incurred and paid a prepayment interest penalty of \$0.3 million, representing 3% of the amount advanced to us under the agreement in January 2011, and 4% of the amount advanced to us under the agreement in March 2012. We recognized a loss from the extinguishment of this debt of \$0.8 million during the second quarter of fiscal year 2014, representing the prepayment interest penalty and the write-off of unamortized debt discount.
- (4) On July 3, 2012, we completed our initial public offering in which we issued and sold 4,166,667 shares of common stock at a public offering price of \$10.00 per share. We received net proceeds of \$34.6 million after deducting underwriting discounts and commissions of approximately \$2.9 million and other offering expenses of approximately \$4.2 million. Upon the closing of the initial public offering, each share of our preferred stock was converted into two thirteenths of a share of our common stock.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and notes included in Part IV, Item 15 of this Annual Report on Form 10-K. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report, including but not limited to those set forth in "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors".

Overview

We develop, sell and support simulation software and services used primarily by vehicle manufacturers to enhance the performance of their products, reduce product development costs and improve the efficiency of their design and engineering processes. Our solutions enable our customers to augment or replace inefficient and expensive methods of evaluating alternative designs, such as wind tunnel testing using physical prototypes, with accurate digital simulations that are more useful and timely. We believe, based on feedback from our customers and data published by them, that use of our software solutions enables significant cost savings and fundamental improvements in their vehicle development process by allowing their engineers and designers to gain crucial insights about design performance early in the design cycle.

Our core product, PowerFLOW[®], is an innovative software solution for simulating complex fluid flow problems, including aerodynamics, thermal management, and aeroacoustics, or wind noise. PowerFLOW relies upon our proprietary technology that we refer to as Digital Physics[®], which is based on algorithms known as the lattice Boltzmann method. Our proprietary technology enables PowerFLOW to predict complex fluid flows with a level of reliability comparable to or better than physical testing, with results that are more accurate and useful than those of alternative computational fluid dynamics, or CFD, methods.

We currently focus primarily on the ground transportation market, including manufacturers in the passenger vehicle, highway truck, off-highway vehicle and train markets, as well as their suppliers. Over 150 manufacturers currently utilize our products and services, including the top 15 global passenger vehicle manufacturers. This data is based on motor vehicle production volume for 2015, as reported by the Organisation Internationale des Constructeurs d'Automobiles, or the International Organization of Vehicle Manufacturers. Global vehicle manufacturers face increasing pressure, from government mandates as well as from consumers, to improve the efficiency of their products. This requires different powertrain choices, changes in the shape of the vehicle, and reductions in vehicle weight, all of which we believe favor the adoption of simulation-driven design.

We continue to expand our offerings in the aerospace and oil and gas production markets and explore other markets in which we believe the capabilities of PowerFLOW have broad application, such as the chemical processing, architecture engineering and construction, power generation, biomedical and electronics industries. The investment in our aerospace vertical business has increased our domain and portfolio of new applications. We have built a customer base of airframe, jet engine and supply manufacturers. We also recently announced the commercial launch and license of our product for use in the oil and gas production market.

We offer our solutions through annual capacity-based licenses, either as software-only, to be run on the customer's own computer hardware, or in the form of software-as-a-service, via our hosted ExaCLOUD offerings. We sell our products and services primarily through our direct sales force, including sales executives and applications engineering teams deployed near our customers in the United States, Europe, Japan, Korea and China, through a distributor in India and through a sales agent in Brazil.

We have a predictable business model based on recurring revenue from a growing customer base. For fiscal year 2017, we recorded total revenues, net loss and Adjusted EBITDA of \$72.6 million, \$(1.1) million and \$6.5 million, respectively, as compared to \$65.4 million, \$4.8 million and \$3.1 million, respectively, for the fiscal year 2016. Since generating our first commercial revenue in 1994, our annual revenue has increased for 22 consecutive years.

During the twelve months ended January 31, 2017, revenue growth was driven by continued deployment of our simulation solutions with our existing customer base as well as by the addition of new customers. We believe that our continued investments in field resources yield growth in both project and license revenue over time. While our geographic mix of revenue outside of the Americas during fiscal year 2017 was consistent with historical trends, the weakening U.S. dollar, particularly against the yen, had a material positive impact on revenue performance for fiscal year 2017 as compared to fiscal year 2016. During fiscal year 2017, 74% of our revenue came from outside of the Americas as compared to 71% for fiscal year 2016. Revenue growth for fiscal year 2017 was 10.9% over the same period a year ago and 9.0% when measured on a constant currency basis.

In the last two months of fiscal year 2017, we experienced increased caution regarding growth and deployment initiatives from our ground transportation customers, which impacted our incremental growth on some renewal orders. We attributed this to our

customers anticipating the impact of changes in the tax, trade and regulatory frameworks within which they operate. Based on renewal activity during this period, we expect that this will have an impact on revenue over the next fiscal year. In addition, as we have experienced on a limited basis in the past, we had a significantly reduced renewal commitment that will impact revenue and growth in the next fiscal year.

Throughout the last decade the market has increasingly recognized the benefits of the lattice Boltzmann-based CFD method to extend digital simulation possibilities. We have observed increased customer interest in not only Exa's proprietary lattice Boltzmann technology, but also in alternative commercial, open source and in-house codes. We believe that the increased market awareness of the lattice Boltzmann method is a positive trend for our product offering in the long run due to our technical leadership, intellectual property and experience with this technology.

Adjusted EBITDA and revenue on a constant currency basis are non-GAAP financial measures. For the definitions of Adjusted EBITDA and revenue on a constant currency basis, and explanation of our management's use of these measures and a reconciliation of our Adjusted EBITDA to our net income, please see "— Non-GAAP Measures" below.

As a percent of revenue, our total operating expenses for fiscal year 2017 decreased approximately 4.7% when compared to the same period last year. This decrease is a result of our prior investments in resources to drive top line growth, including sales, marketing and research and development. While the majority of our expense base is in the United States, we have field resources based in our international offices which provide some natural foreign exchange hedge. As a result, the weakening dollar had a negative impact on total operating expenses when compared to the same period last year. For fiscal year 2017, total operating expenses were \$72.2 million, with growth of 5.9% over the prior year and 5.7% when measured on a constant currency basis. See "— Non-GAAP Measures" below for information about how we calculate and use operating expenses on a constant currency basis.

As a percent of revenue, our income from operations for fiscal year 2017 was 0.5% compared with our loss from operations of 4.2% for fiscal year 2016, primarily as a result of cost-saving initiatives during fiscal year 2017 and the foreign currency impacts described above.

As of January 31, 2017, we had cash and cash equivalents of \$24.6 million compared to \$27.6 million as of January 31, 2016. The strong cash balance reflects strong accounts receivable collections activity and normal seasonal cash flows. Capital expenditures increased by \$1.8 million during fiscal year 2017 compared to fiscal year 2016, primarily due to a \$3.7 million investment in server equipment for our new high performance computing data center located in Virginia.

Seasonality

We have experienced and expect to continue to experience seasonal variations in the timing of customers' purchases of our software products. Many customers make purchase decisions based on their budget cycles, which typically coincide with the calendar year, except in Japan, where our customers' budget cycle typically begins on April 1. Because our software products are sold pursuant to annual subscription agreements and we recognize revenue from these subscriptions over the term of the agreement, downturns or upturns in sales may not be immediately reflected in our operating results. However, these seasonal trends materially affect the timing of our cash flows, as we generally receive the annual license fee at the time the license term commences, or shortly thereafter. As a result, our cash flows from operations are typically highest in the first quarter of each fiscal year.

Results of Operations

The following tables set forth, for the periods presented, data from our consolidated statements of operation, as well as that data as a percentage of revenues. The information contained in these tables should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

(in thousands)	Year Ended January 31,		
	2017	2016	2015
Revenue:			
License revenue	\$ 60,837	\$ 53,499	\$ 49,742
Project revenue	11,743	11,948	11,689
Total revenues	<u>72,580</u>	<u>65,447</u>	<u>61,431</u>
Operating expenses: (1)			
Cost of revenues	19,427	20,117	18,933
Sales and marketing	13,856	10,150	10,668
Research and development	24,319	24,140	21,809
General and administrative (2)	14,582	13,766	12,468
Total operating expenses	<u>72,184</u>	<u>68,173</u>	<u>63,878</u>
Income (loss) from operations	<u>396</u>	<u>(2,726)</u>	<u>(2,447)</u>
Other income (expense), net			
Foreign exchange gain (loss)	166	(322)	344
Interest expense	(140)	(236)	(342)
Interest income	44	12	12
Other income, net	13	7	7
Total other income (expense), net	<u>83</u>	<u>(539)</u>	<u>21</u>
Income (loss) before taxes	479	(3,265)	(2,426)
Provision for income taxes	(1,611)	(1,542)	(16,731)
Net loss	<u>\$ (1,132)</u>	<u>\$ (4,807)</u>	<u>\$ (19,157)</u>

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

(in thousands)	Year Ended January 31,		
	2017	2016	2015
Cost of revenues	\$ 162	\$ 234	\$ 209
Sales and marketing	269	405	413
Research and development	792	886	865
General and administrative	770	751	743
Total stock-based compensation expense	<u>\$ 1,993</u>	<u>\$ 2,276</u>	<u>\$ 2,230</u>

- (2) Includes amortization expense related to intangible assets as follows:

(in thousands)	Year Ended January 31,		
	2017	2016	2015
General and administrative	\$ 350	\$ 350	\$ 350

The following table sets forth, for the periods presented, data from our consolidated statements of operations as a percentage of total revenues:

(as a percent of total revenue)	Year Ended January 31,		
	2017	2016	2015
Revenue:			
License revenue	83.8%	81.7%	81.0%
Project revenue	16.2	18.3	19.0
Total revenues	100.0	100.0	100.0
Operating expenses:			
Cost of revenues	26.8	30.7	30.8
Sales and marketing	19.1	15.5	17.4
Research and development	33.5	36.9	35.5
General and administrative	20.1	21.0	20.3
Total operating expenses	99.5	104.2	104.0
Income (loss) from operations	0.5	(4.2)	(4.0)
Other income (expense), net			
Foreign exchange gain (loss)	0.2	(0.5)	0.6
Interest expense	(0.2)	(0.4)	(0.6)
Interest income	0.1	0.0	0.0
Other income, net	0.0	0.0	0.0
Total other income (expense), net	0.1	(0.8)	0.0
Income (loss) before taxes	0.7	(5.0)	(3.9)
Provision for income taxes	(2.2)	(2.4)	(27.2)
Net loss	(1.6)%	(7.3)%	(31.2)%

Due to rounding, totals may not equal the sum of line items in the table above.

Comparison of Fiscal Years Ended January 31, 2017 and 2016

Revenue

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
License revenue	\$ 60,837	\$ 53,499	\$ 7,338	13.7%
Project revenue	11,743	11,948	(205)	-1.7%
Total revenues	\$ 72,580	\$ 65,447	\$ 7,133	10.9%

License revenue increased 13.7% from \$53.5 million in fiscal year 2016 to \$60.8 million in fiscal year 2017. The \$7.3 million increase was driven almost entirely by increased consumption of simulation capacity by existing customers and the addition of new license customers throughout the year. Deployment continues to expand in our core customer base across our portfolio of applications. We experienced particularly strong demand in our Asian markets. Project revenue decreased by \$0.2 million during fiscal year 2017 compared to fiscal year 2016, which reflects our slowed investment in project capacity in fiscal year 2017, and we anticipate continued fluctuations in project revenue growth into fiscal year 2018. However, our project delivery capability continues to recycle into new opportunities to drive license growth. Both license and project revenue, particularly new customer opportunities, are leveraging the capabilities of our ExaCLOUD platform. Virtually all of our projects are now being delivered using ExaCLOUD exposing our customers to its capabilities. ExaCLOUD continues to play an increasingly important role in our new customer acquisition go-to-market model.

Foreign exchange fluctuations, particularly the strengthening of the Japanese yen, positively impacted total revenue in fiscal year 2017 by \$1.2 million as compared to fiscal year 2016. On a constant currency basis, our total revenues in fiscal year 2017 increased 9.0%, compared with fiscal year 2016.

Cost of revenues

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
Cost of revenues	\$ 19,427	\$ 20,117	\$ (690)	-3.4%

Cost of revenues for fiscal year 2017 was \$19.4 million, a decrease of \$0.7 million, or 3.4%, compared with \$20.1 million during fiscal year 2016. As a percentage of revenues, cost of revenues decreased to 26.8% for fiscal year 2017 from 30.7% for fiscal year 2016. The year-over-year decrease in cost of revenues was driven by decreased personnel-related costs of approximately \$1.3 million associated with a change in headcount mix and lower stock-based compensations, along with a \$0.2 million decrease in hosting fees driven by savings from an amended hosting agreement at our high performance computing data center in New Jersey. These decreases were partially offset by a \$0.4 million increase in royalty costs and a \$0.4 million increase in depreciation expense related to investments made to increase computing capacity.

Sales and marketing

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
Sales and marketing	\$ 13,856	\$ 10,150	\$ 3,706	36.5%

Sales and marketing expenses for fiscal year 2017 were \$13.9 million, an increase of \$3.7 million, or 36.5% compared with \$10.2 million for fiscal year 2016. As a percentage of revenues, sales and marketing expenses increased to 19.1% for fiscal year 2017 from 15.5% for fiscal year 2016. The increase in sales and marketing expenses is primarily attributable to a \$3.5 million increase in payroll and employee-related costs driven by a change in headcount mix, increased travel expenses, and increased commission expense related to the increased volume and timing of customer orders. The balance of the \$0.2 million year-over-year change was driven primarily by increased recruiting fees and expenses for general marketing initiatives.

Research and development

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
Research and development	\$ 24,319	\$ 24,140	\$ 179	0.7%

Research and development expenses for fiscal year 2017 were \$24.3 million, an increase of \$0.2 million, or 0.7%, compared with \$24.1 million for fiscal year 2016. As a percentage of revenues, research and development expense decreased to 33.5% for fiscal year 2017 from 36.9% for fiscal year 2016. The period-over-period increase in expense is attributable to a \$0.3 million increase in professional service fees due to increased legal fees associated with the hiring of foreign employees and other software consulting fees; a net increase of \$0.2 million in payroll and other employee-related costs driven by an increase in headcount and merit increases and partially offset by lower bonus and commission expense, lower travel expenses and lower stock-based compensation expense; and a \$0.1 million increase in depreciation expense due to investments made to increase computing capacity. These increases were partially offset by decreases in network and facility expenses as a result of a \$0.4 million decrease in hosting fees driven by savings from an amended hosting agreement at our high performance computing data center in New Jersey.

General and administrative

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
General and administrative	\$ 14,582	\$ 13,766	\$ 816	5.9%

General and administrative expenses for fiscal year 2017 were \$14.6 million, an increase of \$0.8 million, or 5.9%, compared with \$13.8 million for fiscal year 2016. As a percentage of revenues, general and administrative expenses decreased to 20.1% for fiscal year 2017 from 21.0% for fiscal year 2016. The period-over-period increase in expense was primarily driven by a \$0.4 million increase in pre-launch hosting costs associated with the commencement of a new agreement at our new high performance computer data center in Virginia. The balance of the increase is primarily attributable to a net increase of \$0.4 million in payroll-related costs driven by an increase in headcount and merit increases and partially offset by lower bonus expense.

Total other income (expense), net

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
Total other income (expense), net	\$ 83	\$ (539)	\$ 622	(115.4)%

Total other income (expense), net for the year ended January 31, 2017 was \$0.1 million compared to total other income (expense), net of \$(0.5) million for the year ended January 31, 2016. Total other income (expense), net consists primarily of foreign exchange gains and losses offset by interest expense associated with our capital lease obligations. The period-over-period change in total other income (expense), net is primarily attributable to foreign exchange fluctuations in the Euro and Japanese yen.

Provision for income taxes

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2017	2016		
Provision for income taxes	\$ 1,611	\$ 1,542	\$ 69	4.5%

The income tax provision increased from \$1.5 million in fiscal year 2016 to \$1.6 million in fiscal year 2017. The provision for both periods primarily consists of the tax effects of foreign operating results with foreign withholding taxes.

During fiscal year 2015, we determined that the net United States federal and state deferred tax assets were no longer more-likely-than-not realizable. As a result, we recorded a deferred tax provision of \$14.4 million to establish a full valuation allowance on the net United States federal and state deferred tax assets. In determining the realizability of these assets, we considered numerous factors including historical profitability, estimated future taxable income, prudent and feasible tax planning strategies and the industry in which we operate. Through the three months ended April 30, 2015, our results reflected a three-year cumulative loss position in the United States; prior thereto, our historical results reflected a three-year cumulative profit. Reflecting management's plans to continue investing in the business for future growth, we continued in a three-year cumulative loss position through the remainder of fiscal year 2015 and 2016. This historical loss position at April 30, 2015 and projected cumulative loss position resulted in significant negative evidence which caused management to modify its assessment of our deferred tax assets, concluding that it no longer was more likely than not that these deferred tax assets would be realized and thus, a valuation allowance was necessary against the full amount of our United States net deferred tax assets. Most of our revenues are generated from ground transportation customers outside the United States but a significantly disproportionate amount of our operating expenses, including investments in future products, are incurred in the United States, causing the results of operations in the United States to reflect losses during this period of investment.

Our management reassesses the realization of the deferred tax assets each reporting period. To the extent that the financial results of our United States operations improve in the future and the deferred tax assets become realizable, we will reduce the valuation allowance through earnings.

Under Section 382 of the Internal Revenue Code of 1986, as amended, substantial changes in our ownership may limit the amount of net operating loss carryforwards that can be utilized annually in the future to offset our United States federal taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of the Company of more than 50% within a three-year period. During the first quarter of fiscal year 2015, management determined that we had experienced an ownership change for purposes of Section 382. This ownership change resulted in annual limitations to the amount of net operating loss carryforwards that can be utilized to offset future taxable income, if any, at the federal level. The annual limit was approximately \$14.0 million for fiscal year 2015, \$16.8 million for each of fiscal years 2016 through 2019, \$8.0 million for fiscal year 2020 and \$6.4 million for each fiscal year thereafter. The ownership change also resulted in the loss of our ability to utilize essentially all state net operating loss carryforwards, credits and other state attributes, which resulted in a write-off of \$0.8 million of state deferred tax assets during fiscal year 2015.

We do not expect that our unrecognized tax benefit will change significantly within the next twelve months. We and one or more of our subsidiaries file United States federal income tax returns and tax returns in various state and foreign jurisdictions. With limited exceptions, we are no longer subject to federal, state, local or foreign examinations for years prior to January 31, 2012. However, carryforward attributes that were generated prior to January 31, 2013 may still be adjusted upon examination by state or local tax authorities if they either have been or will be used in a future period.

Comparison of Fiscal Years Ended January 31, 2016 and 2015

Revenue

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
License revenue	\$ 53,499	\$ 49,742	\$ 3,757	7.6%
Project revenue	11,948	11,689	259	2.2%
Total revenues	\$ 65,447	\$ 61,431	\$ 4,016	6.5%

License revenue increased 7.6% from \$49.7 million in fiscal year 2015 to \$53.5 million in fiscal year 2016. The \$3.8 million increase was driven almost entirely by increased consumption of simulation capacity by existing customers and the addition of 17 new license customers. Deployment continued to expand in our core customer base across our portfolio of applications. We experienced particularly strong demand in our Asian markets and in our North America passenger automotive customer base. Project revenue increased \$0.3 million during fiscal year 2016 compared to fiscal year 2015 due to expanded sales and greater activity with existing customers. We anticipated less project revenue growth in fiscal year 2016 as our investment in project capacity has slowed. But our project delivery capability continued to recycle into new opportunities to drive license growth.

Foreign exchange fluctuations, particularly the weakness of the Euro and the Japanese yen, negatively impacted total revenue in fiscal year 2016 by \$5.2 million as compared to fiscal year 2015. On a constant currency basis, our total revenues in fiscal year 2016 increased 15.0%, compared with fiscal year 2015.

Cost of revenues

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
Cost of revenues	\$ 20,117	\$ 18,933	\$ 1,184	6.3%

Cost of revenues for fiscal year 2016 was \$20.1 million, an increase of \$1.2 million, or 6.3%, compared with \$18.9 million during fiscal year 2015. As a percentage of revenues, cost of revenues decreased to 30.7% for fiscal year 2016 from 30.8% for fiscal year 2015. The year-over-year increase in cost of revenues was almost entirely attributable to increased royalty costs of approximately \$1.0 million associated with higher customer license levels and expanded use of an embedded sublicensed product. The remaining increase was due to increased depreciation expense of \$0.2 million associated with expansions at our high performance computing data center in New Jersey.

Sales and marketing

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
Sales and marketing	\$ 10,150	\$ 10,668	\$ (518)	-4.9%

Sales and marketing expenses for fiscal year 2016 were \$10.2 million, a decrease of \$0.5 million, or 4.9% compared with \$10.7 million for fiscal year 2015. As a percentage of revenues, sales and marketing expenses decreased to 15.5% for fiscal year 2016 from 17.4% for fiscal year 2015. The decrease in sales and marketing expenses is primarily attributable to a \$1.0 million decrease in payroll and employee-related costs, including reduced commission expense related to the timing of customer orders and lower travel expenses, and a \$0.2 million decrease in consulting fees, offset by an increase of \$0.7 million in costs related to marketing programs and initiatives.

Research and development

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
Research and development	\$ 24,140	\$ 21,809	\$ 2,331	10.7%

Research and development expenses for fiscal year 2016 were \$24.1 million, an increase of \$2.3 million, or 10.7%, compared with \$21.8 million for fiscal year 2015. As a percentage of revenues, research and development expense increased to 36.9% for fiscal year 2016 from 35.5% for fiscal year 2015. Increased payroll and employee-related costs accounted for approximately \$2.0 million of the year-over-year increase, primarily as a result of the net addition of six new scientists and software engineers, merit increases for existing personnel and an increase in stock-based compensation expense. In addition, expansions at our high performance computing data center in New Jersey resulted in increased facility costs of approximately \$0.3 million.

General and administrative

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
General and administrative	\$ 13,766	\$ 12,468	\$ 1,298	10.4%

General and administrative expenses for fiscal year 2016 were \$13.8 million, an increase of \$1.3 million, or 10.4%, compared with \$12.5 million for fiscal year 2015. As a percentage of revenues, general and administrative expenses increased to 21.0% for fiscal year 2016 from 20.3% for fiscal year 2015. Increased payroll and employee-related costs accounted for approximately \$0.8 million of

the increase, primarily as a result of the net addition of three new support personnel and compensation increases for existing personnel. Approximately \$0.3 million of the increase is attributable to increases in depreciation and rent expense associated with the expansion of office space in Japan and with our extended headquarter lease in Burlington, Massachusetts. The balance of the increase, approximately \$0.2 million, is primarily attributable to professional service fees, including costs associated with the financial statement audit, a foreign statutory audit, patent legal fees, and tax and recruiting services.

Total other income (expense), net

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
Total other income (expense), net	\$ (539)	\$ 21	\$ (560)	(2666.7)%

Total other (expense) income, net for the year ended January 31, 2016 was \$(0.5) million compared to total other (expense) income, net of less than \$0.1 million for the year ended January 31, 2015. The period-over-period change in total other (expense) income, net is primarily attributed to foreign exchange fluctuations in the Euro and Japanese yen, which was partially offset by a reduction in interest expense associated with our capital lease obligations.

(Provision) benefit for income taxes

(in thousands, except percentages)	Year Ended January 31,		Change	% Change
	2016	2015		
Provision for income taxes	\$ 1,542	\$ 16,731	\$ (15,189)	(90.8)%

The income tax provision decreased from \$16.7 million in fiscal year 2015 to \$1.5 million in fiscal year 2016. The income tax provision for fiscal year 2016 primarily consists of the tax effects of foreign operating results and foreign withholding taxes. The income tax provision for fiscal year 2015 includes a \$14.4 million non-cash charge to record a valuation allowance against our United States net deferred tax assets and a \$0.8 million non-cash write-off of state deferred taxes.

Non-GAAP Measures

We provide certain non-GAAP financial measures to investors as additional information in order to supplement our consolidated financial statements, which are presented in accordance with accounting principles generally accepted in the United States, or GAAP. The non-GAAP financial information presented here should be considered in conjunction with, and not as a substitute for, or superior to, the financial information presented in accordance with GAAP and should not be considered a measure of our liquidity. There are significant limitations associated with the use of non-GAAP financial measures. Further, these measures may differ from the non-GAAP information, even where similarly titled or used by other companies and therefore should not be used to compare our performance to that of other companies.

Revenue and total operating expenses on a constant currency basis. Our international operations generate revenue and incur expenses that are denominated in foreign currencies, and changes in currency exchange rates can materially affect our consolidated results of operations. Our principal exposures are to fluctuations in exchange rates for the United States dollar versus the British pound, Chinese yuan, Euro, Japanese yen, and Korean won. To provide investors with information concerning underlying trends in our business, we disclose revenue and total operating expenses on a constant currency basis, which we define as GAAP revenue or operating expenses, adjusted to reverse the impact of changes in the exchange rates of the principal currencies in which our international operations generated revenue and incurred expenses. We calculate revenue and total operating expenses on a constant currency basis by converting revenue or operating expenses that were generated in the currencies specified above during the fiscal year ended January 31, 2017 to United States dollars at assumed exchange rates equal to the exchange rates in effect for such currencies during the corresponding period of the previous fiscal year, rather than the exchange rates actually in effect during the current fiscal year.

Adjusted EBITDA. We define Adjusted EBITDA as EBITDA, excluding non-cash, stock-based compensation expense. We define EBITDA as net loss, excluding depreciation and amortization, interest expense, net, other income, net, foreign exchange gain (loss) and provision for income taxes. The GAAP measure most comparable to Adjusted EBITDA is net loss.

Non-GAAP operating income (loss). We define non-GAAP operating income (loss) as GAAP operating income (loss) excluding non-cash, stock-based compensation expense and amortization of acquired intangible assets. The GAAP measure most comparable to non-GAAP operating income (loss) is operating income (loss).

Non-GAAP net income (loss). We define non-GAAP net loss as GAAP net loss excluding the after-tax impact of stock-based compensation expense and amortization of acquired intangible assets. The GAAP measure most comparable to non-GAAP net in come (loss) is net loss.

Non-GAAP net income (loss) per diluted share. We define non-GAAP net loss per diluted share as GAAP net loss per diluted share excluding the after-tax impact of non-cash, stock-based compensation expense and amortization of acquired intangible assets. The GAAP measure most comparable to non-GAAP net income (loss) per diluted share is net loss per diluted share.

Our management uses these non-GAAP financial measures to evaluate our operating performance and for internal planning and forecasting purposes. By excluding material non-cash expenses related to stock-based compensation and depreciation and amortization, we believe that these measures more clearly reflect the underlying trends in our business, are useful for comparing current results with prior period results, and are helpful to investors and financial analysts in assessing our operating performance. For example, our management considers Adjusted EBITDA to be an important indicator of our operational strength and the performance of our business and a good measure of our historical operating trends. However, each of these non-GAAP financial measures may have limitations as an analytical tool. In considering our Adjusted EBITDA, non-GAAP operating income (loss), non-GAAP net loss and non-GAAP net loss per diluted share, investors should take into account the following reconciliations of these non-GAAP financial measures to the comparable GAAP financial measures:

Adjusted EBITDA:	Year Ended January 31,		
	2017	2016	2015
(in thousands)			
Net loss	\$ (1,132)	\$ (4,807)	\$ (19,157)
Add back:			
Depreciation and amortization	4,077	3,520	2,917
Interest expense, net	96	224	330
Other income, net	(13)	(7)	(7)
Foreign exchange (gain) loss	(166)	322	(344)
Provision for income taxes	1,611	1,542	16,731
EBITDA	4,473	794	470
Stock-based compensation expense	1,993	2,276	2,230
Adjusted EBITDA	<u>\$ 6,466</u>	<u>\$ 3,070</u>	<u>\$ 2,700</u>
Non-GAAP operating income (loss):	Year Ended January 31,		
	2017	2016	2015
(in thousands)			
Operating income (loss)	\$ 396	\$ (2,726)	\$ (2,447)
Add back:			
Stock-based compensation expense	1,993	2,276	2,230
Amortization of acquired intangible assets	350	350	350
Non-GAAP operating income (loss)	<u>\$ 2,739</u>	<u>\$ (100)</u>	<u>\$ 133</u>
Non-GAAP net income (loss):	Year Ended January 31,		
	2017	2016	2015
(in thousands)			
Net loss	(1,132)	(4,807)	(19,157)
Add back:			
Stock-based compensation expense	1,993	2,276	2,230
Amortization of acquired intangible assets	350	350	350
Income tax effect (1)	(820)	(919)	(903)
Non-GAAP net income (loss)	<u>\$ 391</u>	<u>\$ (3,100)</u>	<u>\$ (17,480)</u>
Non-GAAP net income (loss), per diluted share:	Year Ended January 31,		
	2017	2016	2015
Net loss, per diluted share (2)	\$ (0.08)	\$ (0.33)	\$ (1.39)
Add back:			
Stock-based compensation expense	0.13	0.16	0.16
Amortization of acquired intangible assets	0.02	0.02	0.03
Income tax effect (1)	(0.06)	(0.06)	(0.07)
Non-GAAP net income (loss), per diluted share (2)(3):	<u>\$ 0.03</u>	<u>\$ (0.21)</u>	<u>\$ (1.27)</u>

- (1) The tax effect of non-cash stock-based compensation expense and non-cash amortization of acquired intangibles is estimated using a blended rate equivalent to our annual statutory United States federal tax rate and our estimated state tax rate. The tax effect is exclusive of any impact from valuation allowances established against our United States net deferred tax assets and other discrete items. Due to the differences in the tax treatment of items excluded from non-GAAP earnings, as well as the methodology applied to our estimated annual tax rates as described above, our estimated tax rate on non-GAAP income may differ from our GAAP tax rate and from our actual tax liabilities.

- (2) Share amounts utilized on a fully diluted basis were approximately 14.8 million, 14.5 million and 13.7 million for the fiscal years ended January 31, 2017, 2016 and 2015, respectively.
- (3) Due to rounding, totals may not equal the sum of line items in the table above.

Liquidity

Overview

Our primary sources of liquidity during fiscal year 2017 were cash and cash equivalents on hand, cash from operations and proceeds from stock option exercises. Our primary uses of cash during the fiscal year 2017 were capital expenditures and payments of capital lease obligations. As of January 31, 2017, we had \$24.6 million in cash and cash equivalents.

Net Cash Flows provided by (used in) Operating Activities

Variations in the amount of our net cash provided by or used in operating activities are primarily the result of changes in the amount of our working capital accounts, mainly accounts receivable and deferred revenue, the timing of cash payments from our customers and of our cash expenditures, principally employee salaries, accounts payable and payments of value added taxes and consumption taxes on the receivables of our foreign subsidiaries.

Cash payments from our customers fluctuate due to timing of new and renewal license sales, which typically coincide with our customers' budget cycles. The fourth quarter of each fiscal year generally has the highest license sales, with payment of the license fee becoming due at the commencement of the license term. As a result, our cash flows from operations are typically highest in the first quarter of each fiscal year. Generally, customers are invoiced in advance for their annual subscription fee and the invoices are recorded in accounts receivable and deferred revenue, with deferred revenues being recognized ratably over the term of the subscription agreement.

For fiscal year 2017, net cash provided by operating activities totaled \$2.9 million and was primarily the result of fluctuations in working capital, including a decrease in accounts receivable and a decrease in deferred revenue. Accounts receivable and deferred revenue typically fluctuate depending on the timing of when customer orders are received by the Company and invoiced to customers and the timing of cash payments from the customers. During fiscal year 2017, we received fewer cash payments at the end of the period, resulting in a decrease in cash provided by operating activities over the prior year period. In addition, our accounts payable and accrued expense balances decreased over the prior year, due to the timing of cash settlements, which also contributed to the decrease in cash provided by operating activities.

For fiscal year 2016, net cash provided by operating activities totaled \$10.0 million and was primarily the result of fluctuations in working capital, including an increase in deferred revenue of \$10.5 million. Deferred revenue and accounts receivable typically fluctuate depending on the timing of when customer orders are received by and invoiced to customers and the timing of cash payments from the customers. During fiscal year 2016, we received cash payments from one large customer in Germany for both its 2016 and 2017 license orders, resulting in a substantial increase in cash provided by operating activities over the prior year period. In addition, our accounts payable and accrued expense balances increased over the prior year, due to the timing of cash settlements, and this also contributed to the increase in cash provided by operating activities.

For fiscal year 2015, net cash used in operating activities totaled \$3.1 million and was primarily the result of decreased profitability and fluctuations in working capital, including a decrease in deferred revenue of \$3.4 million. As of the end of fiscal year 2014, one large customer in Germany had ordered and fully paid for a subscription license that ran through fiscal year 2015. As of January 31, 2015, this customer was still negotiating with us and had not placed or paid for a full year license order for the upcoming year. This had the impact of a significant decrease in deferred revenue but no fluctuation in accounts receivable for this customer in fiscal year 2015.

Net Cash Flows used in Investing Activities

Net cash used in investing activities for fiscal years 2017, 2016 and 2015 was \$4.1 million, \$2.1 million and \$0.8 million, respectively, and relates primarily to purchases of furniture and fixtures, servers, workstations, and other computer software and equipment to support the growth in our business operations. For fiscal year 2017, capitalized equipment costs for our new data center accounted for the majority of the cash outflows. In fiscal year 2016, capitalized renovations to our Burlington, Massachusetts headquarters office accounted for the majority of the cash outflows, partially offset by a decrease in restricted cash as a result of the release of a portion of our required security deposit letter of credit in connection with the amendment of our corporate headquarters lease. In fiscal year 2015, cash outflows were primarily related to purchases of computer and software equipment.

simulation capacity on customer installed software and are sold based upon simulation capacity expected to be used within a certain time period—typically not exceeding one year.

We typically sell term and capacity-based software licenses combined in a bundled sale. For instance, when customers purchase simulation capacity, they typically also purchase a number of term-based licenses for preparation and analysis software. All of our software licenses include multiple elements such as maintenance and support. Pursuant to the guidance within ASC 985-605, we have determined that since we do not have vendor-specific objective evidence of the fair value of the individual elements contained in a bundled sale of term and capacity-based software licenses, the arrangement is treated as a single unit of accounting and revenue is recognized ratably on a daily basis over the term of the license agreement, which coincides with the duration of the maintenance and support services. Our arrangements typically do not include rights to carryover any unused capacity beyond the contractual license term or any customer right of return.

Licenses have finite terms that are not extendible at their expiration, and capacity usage is limited by contract to the amount specified. Our practice is not to modify existing capacity-based licenses to allow simulation capacity to be added to an existing arrangement. A customer desiring to purchase additional simulation capacity or to license additional users of our preparation and analysis software during the term of the original simulation license does so by entering into a separate arrangement. Revenue from these new arrangements is recognized over the term of the new agreements, which include bundled maintenance and support, and are for a term of less than twelve months, coterminous with the remaining term of the original simulation license.

We commence recognition of term license revenue when persuasive evidence of an arrangement exists; delivery of the software or license keys has occurred and all service elements, if bundled or linked, have commenced; price is fixed or determinable; and collection of the resulting receivable is considered probable by management. Payments received from customers in advance of revenue recognition are treated as deferred revenue.

If training or consulting service projects are bundled with a software license sale or, as a result of specific facts and circumstances, are determined to be linked with a software license sale, we treat this as one arrangement and recognize revenue ratably on a daily basis over the license period provided that delivery of all elements of the arrangement have commenced.

Software as a service (ExaCLOUD)

We recognize revenue from software-as-a-service arrangements in accordance with ASC 605 – *Revenue Recognition*. Capacity-based licenses allow the customer to buy simulation capacity as a service hosted by us and are sold based upon simulation capacity expected to be used within a certain time period—typically not exceeding one year. The contracts have finite terms that are not extendible at their expiration, and capacity usage is limited by contract to the amount specified. Our practice is not to modify existing capacity-based licenses to allow simulation capacity to be added to an existing arrangement. A customer desiring to purchase additional simulation capacity or to license additional users of our preparation and analysis software during the term of the original simulation license must do so by entering into a separate arrangement. Revenue from these arrangements is recognized as the capacity is used. In the event that any capacity remains unused at the end of the term of the arrangement, it is recognized as revenue at that time. With the ExaCLOUD solution, customers have access to hosted simulation capacity as well as hosted preparation and analysis software through a web browser. The ExaCLOUD solution includes a “pay-as-you-use” model and an option to purchase a block of simulation capacity upfront to be used over a defined period – typically not exceeding one year. Revenue from these arrangements is recognized as the cloud hosting service is provided.

Projects

We also derive revenue from fees for separate, project-based services. Our projects are typically short-term in nature and usually complete in less than 90 days. Project pricing is generally either fixed fee or time and material based. We recognize revenue from these service arrangements in accordance with ASC 605. Projects are either sold as one deliverable, or as multiple deliverables with stand-alone value. For single deliverable projects, to the extent that adequate project reporting of time incurred and time to complete records exist, we recognize consulting services revenue as the services are performed under the proportionate performance method. In other situations, for example, providing a customer with an on-site engineer for a defined period of time to provide services at the customer’s direction, we recognize revenue ratably over the service period. In situations where we are unable to utilize the proportional performance method, for example due to either the lack of adequate documentation of time incurred or to be incurred or a lack of a defined service period, revenue is deferred until the contract is completed.

For projects which have multiple deliverables, each with stand-alone value, we recognize revenue based on ASC 605 and allocate the arrangement consideration based on the relative selling price of the deliverables. For our project deliverables, we use best estimated selling price (“BESP”) as our selling price if vendor-specific objective evidence (“VSOE”) or third-party evidence of selling price (“TPE”) do not exist. If each deliverable does not have stand-alone value, the project is then deemed to be a single unit of accounting.

Multiple element arrangements

Multiple element arrangements may include customer rights to any combination of software, project deliverables, software as a service, maintenance and training.

When more than one element is contained in a single arrangement, we first allocate total arrangement revenue based upon relative selling prices into two categories: (1) non-software components, such as services under projects not related to software licenses or software-as-a-service and (2) software components, such as software licenses, maintenance and support, and other software-related services.

Revenue allocated to non-software services is recognized based on ASC 605 and the arrangement consideration is allocated based on the relative selling price of the deliverables. For non-software deliverables, we use our best estimate of selling price (“BESP”) if vendor-specific objective evidence (“VSOE”) or third-party evidence of selling price (“TPE”) do not exist.

Revenue allocated to products sold which meet the definition of software components is recognized based on software accounting guidance provided for in ASC 985-605. Under this guidance, residual method is used to recognize revenue when a multiple element arrangement includes one or more software related elements to be delivered at a future date and VSOE of fair value of all undelivered elements exists (typically maintenance and other services), but does not exist for the delivered elements (typically the software). However, since we cannot establish VSOE for our undelivered elements, the entire software arrangement is deferred and recognized ratably over the contract (maintenance) period. This particularly includes our term-based licenses since the software license term and the maintenance term are co-terminus.

Income Taxes

Income taxes are accounted for in accordance with ASC 740, *Income Taxes*. ASC 740 requires that deferred tax assets and liabilities are recorded based on temporary differences between the financial statement amounts and the tax basis of assets and liabilities, measured using enacted tax rates in effect for the year in which the differences are expected to reverse. We routinely assess the likelihood that we will be able to realize our deferred tax assets.

In determining the realizability of the net United States federal and state deferred tax assets, we consider numerous factors including historical profitability, estimated future taxable income, prudent and feasible tax planning strategies and the industry in which we operate. Our management reassesses the realization of the deferred tax assets each reporting period, which has resulted in a full valuation allowance against our United States deferred tax assets in fiscal years 2017, 2016 and 2015. To the extent that the financial results of our United States operations improve in the future and the deferred tax assets become realizable, we will reduce the valuation allowance through earnings.

We follow ASC 740-10-25 with regards to accounting for uncertain tax positions, which prescribes a threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken within an income tax return. For each tax position, the enterprise must determine whether it is more likely than not that the position will be sustained upon examination based on the technical merits of the position, including resolution of any related appeals or litigation. A tax position that meets the more likely than not recognition threshold is then measured to determine the amount of benefit to recognize within the financial statements. No benefits may be recognized for tax positions that do not meet the more likely than not threshold.

Our intention is to reinvest the total amount of our unremitted foreign earnings in the local international jurisdictions, except for instances where we can remit such earnings to the U.S. without an associated net tax cost. As a result, we do not provide for United States taxes on the unremitted earnings of our international subsidiaries.

Stock-Based Compensation

We account for stock based compensation in accordance with ASC 718, *Compensation—Stock Compensation*. ASC 718 establishes accounting for stock-based awards exchanged for employee services. Under the fair value recognition provisions of ASC 718, share based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service / vesting period. Determining the appropriate fair value model and calculating the fair value of stock-based payment awards require the use of highly subjective assumptions, including the expected life of the stock-based payment awards and stock price volatility.

We estimate the grant date fair value of stock options and the related compensation expense, using the Black-Scholes option valuation model. This option valuation model requires the input of subjective assumptions including: (1) expected life (estimated period of time outstanding) of the options granted, (2) volatility, (3) risk-free rate and (4) dividends. Because share-based compensation expense is based on awards ultimately expected to vest, it is reduced for estimated forfeitures. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeiture rates differ from those estimates. We have estimated

expected forfeitures of stock options based on our historical turnover rate and used these rates in developing a future forfeiture rate. If our actual forfeiture rate varies from our estimates, additional adjustments to compensation expense may be required in future periods. In general, the assumptions used in calculating the fair value of stock-based payment awards represent management's best estimates, but the estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our stock-based compensation expense could be materially different in the future.

Since adopting ASC 718, we have been unable to use historical employee exercise and option expiration data to estimate the expected term assumption for the Black-Scholes grant-date valuation. As such, we have utilized the "simplified" method, as prescribed by Staff Accounting Bulletin No. 107, *Share-Based Payment*, to estimate on a formula basis the expected term of its stock options considered to have "plain vanilla" characteristics.

We utilize the Federal Reserve Board's published Treasury Constant Maturity rate which most closely matches the option term. As an example, for a 6.25 year term, we would use the 7-year rate coinciding with the option issuance date.

We have never paid dividends and do not currently intend to pay dividends.

As we do not have a trading history for our common stock prior to our initial public offering in July 2012 or a significant trading range for our common stock trading since our initial public offering, we estimate the expected price volatility for our common stock by taking the average historic price volatility for selected industry peers based on daily price observations over a period equivalent to the expected term of the stock options granted. Our industry peers consist of several public companies similar to us in size, stage of life cycle and financial leverage. We intend to consistently apply this process using the same public companies until a sufficient amount of historical information regarding the volatility of our common stock becomes available, or unless circumstances change such that the currently utilized companies are no longer similar to us, in which case, we will identify and utilize more suitable companies with publicly available share prices in the calculation.

Research and Development Expenses

Research and development expense includes costs incurred to develop intellectual property. The costs for the development of new software and substantial enhancements to existing software are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized. We have determined that technological feasibility is established at the time a working model of software is completed. Because we believe that under our current process for developing software completion of the software occurs essentially concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

Internal-Use Software

Costs incurred during the application development stage of internal-use software projects, such as those used to develop internal systems, are capitalized. Capitalized costs include external consulting fees and payroll and payroll-related costs for employees in our development and information technology groups who are directly associated with, and who devote time to, our internal-use software projects during the application development stage. Capitalization begins when the planning stage is complete and we commit resources to the software project. Amortization of the asset commences when the software is complete and placed in service. We amortize completed internal-use software over its estimated useful life. Costs incurred during the planning, training and post-implementation stages of the software development life-cycle are expensed as incurred. Costs related to upgrades and enhancements of existing internal-use software that increase the functionality of the software are also capitalized.

Foreign Currency Translation

We have foreign subsidiaries in the United Kingdom, France, Germany, Italy, Japan, Korea and China. Foreign subsidiary records are maintained in the local currency. Foreign currency effects are accounted for in accordance with ASC 830 – *Foreign Currency Matters*. Other than for our subsidiary in the United Kingdom, the functional currency for all subsidiaries is the respective local currency. The resulting gains and losses from translation are included as a component of other comprehensive income. Transaction gains and losses and re-measurement of assets and liabilities denominated in currencies other than an entity's functional currency are included in other income (expense), net. For our subsidiary in the United Kingdom, which is unable to generate sufficient cash flows in its local currency to sustain operational viability, all assets and liabilities are re-measured into United States dollars, with any resulting unrealized gains or losses being recorded as a component of other income (expense), net.

We review the functional currencies of our subsidiaries on a quarterly basis in accordance with the "Foreign/Parent Currency" indicators outlined in Appendix A to ASC 830 to determine if any changes should be made.

Valuation of Acquired Intangible Assets

Our intangible assets, which were acquired as part of a business combination, are valued based on estimates of future cash flows and amortized over their estimated useful lives. We evaluate intangible assets when events occur or circumstances change that may reduce the value of the asset below its carrying amount using forecasts of discounted future cash flows. Estimates of future cash flows require assumptions related to revenue and operating income growth, asset-related expenditures, working capital levels and other factors. Different assumptions from those made in our analysis could materially affect projected cash flows and our evaluation of impairment. Should the fair value of our finite-lived intangible assets decline because of reduced operating performance, market declines, or other indicators of impairment, or as a result of changes in the discount rate, charges for impairment may be necessary.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers*, which supersedes nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle, as a result of which more judgment and estimates may be required within the revenue recognition process than are required under existing GAAP. The standard is effective for annual periods beginning after December 15, 2018, and interim periods therein. The two permitted transition methods under the new standard are: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures).

Though we continue to evaluate the impact of our pending adoption of this standard, we plan to adopt the standard using the modified retrospective approach with the cumulative effect of initially adopting recognized at the date of adoption. The standard is expected to have a significant impact on the way we account and contract for our on-premise software license contracts. Accounting for revenue related to services and ExaCLOUD offerings is expected to remain substantially unchanged due to the over-time nature of such performance obligations. Due to the complexity of certain of our license contracts, the actual revenue recognition treatment required under the standard may be dependent on contract-specific terms at the time of sale and adoption of the new standard. We are also assessing the impact of capitalizing costs associated with ongoing customer contracts, specifically commission payments.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This standard requires the recognition of lease assets and liabilities for all leases, with certain exceptions, on the balance sheet. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. This ASU is effective for annual periods beginning after December 15, 2018, and for interim periods therein. We are currently evaluating the requirements of this ASU and have not yet determined its impact on our consolidated financial results.

In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718)—Improvements to Employee Share-Based Payment Accounting*. This standard simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, statutory tax withholding requirements, and classification on the statement of cash flows. The provisions of this ASU are effective for annual periods beginning after December 15, 2016, and for interim periods therein. We have evaluated this standard and believe that when we adopt it in the first quarter of fiscal year 2018, it will not have a material impact on our consolidated financial results. As part of the adoption, we expect to cease applying a forfeiture rate estimate when calculating share-based compensation expense, which is not expected to result in a material adjustment to retained earnings in fiscal year 2018. Additionally, while we have \$1,199 of previously unrecognized excess tax benefits attributable to stock option exercises, the adoption is not expected to result in any adjustment to retained earnings because of our full valuation allowance in the United States. Excess tax benefits for share-based payments will now be included in net operating cash rather than in net financing cash. These changes related to excess tax benefits will be applied prospectively in accordance with this standard, and prior periods will not be adjusted.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230)—Restricted Cash*. This standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash and restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. Early adoption is permitted. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, and for interim periods therein. We are currently evaluating the requirements of this ASU, but we do not expect it to have a material impact on our consolidated financial results.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Risk

As we conduct business in multiple international currencies throughout the world, our international operations generate revenue and incur expenses that are denominated in foreign currencies. These amounts have in the past, and could in the future, be materially affected by currency fluctuations. Our principal exposures are to fluctuations in exchange rates for the United States dollar versus the Euro and the Japanese yen, and, to a lesser extent, the British pound, Chinese yuan and Korean won. Changes in currency exchange rates could adversely affect our consolidated results of operations or financial position. Additionally, our international operations maintain cash balances denominated in foreign currencies. To reduce the risk associated with translation of foreign cash balances into our reporting currency, we typically avoid maintaining excess cash balances in foreign currencies by frequently settling intercompany obligations under our transfer pricing agreements. To date, we have not hedged our exposure to changes in foreign currency exchange rates and, as a result, we could incur unanticipated translation gains and losses.

The Japanese yen was approximately 11.5% stronger, on average, for fiscal year 2017 when compared to the U.S. dollar for fiscal year 2016, and had the largest impact to the financial results of any of our foreign currencies. This fluctuation directly impacted revenue and operating expense, resulting in an increase of \$1.4 million and \$0.4 million, respectively, during fiscal year 2017.

The exchange rate impact of other currencies for fiscal year 2017 was a decrease to both revenue and operating expense of approximately \$0.2 million and \$0.3 million, respectively.

For fiscal year 2017, a 10% increase in the exchange rates for the United States dollar versus the Euro, Japanese yen, British pound, Chinese yuan and Korean won would have resulted in a \$4.1 million increase in revenue.

Interest Rate Sensitivity

We do not believe that we are exposed to material interest rate risk at this time. Interest income is sensitive to changes in the general level of United States and international interest rates. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. Our cash and short-term investments are relatively insensitive to interest rate changes. In future periods, we will continue to evaluate our investment policy in order to ensure that we continue to meet our overall objectives.

We do not believe that a 10% change in interest rates would have a material impact on our financial position or results of operations.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND FINANCIAL STATEMENT
SCHEDULE OF
EXA CORPORATION

Consolidated Financial Statements:

Report of Independent Registered Public Accounting Firm	47
Consolidated Balance Sheets as of January 31, 2017 and 2016	48
Consolidated Statements of Operations for the Fiscal Years Ended January 31, 2017, 2016 and 2015	49
Consolidated Statements of Comprehensive Loss for the Fiscal Years Ended January 31, 2017, 2016 and 2015	50
Consolidated Statements of Stockholders' Equity for the Fiscal Years Ended January 31, 2017, 2016 and 2015	51
Consolidated Statements of Cash Flows for the Fiscal Years Ended January 31, 2017, 2016 and 2015	52
Notes to Consolidated Financial Statements	53

Financial Statement Schedule:

Schedule II—Valuation and Qualifying Accounts	72
---	----

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Exa Corporation:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Exa Corporation and its subsidiaries as of January 31, 2017 and January 31, 2016, and the results of their operations and their cash flows for each of the three years in the period ended January 31, 2017 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 22, 2017

EXA CORPORATION
Consolidated Balance Sheets
(in thousands, except share data)

	January 31,	
	2017	2016
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 24,552	\$ 27,649
Accounts receivable	24,259	32,072
Prepaid expenses and other current assets	2,898	3,707
Total current assets	51,709	63,428
Property and equipment, net	14,028	12,032
Intangible assets, net	1,694	2,044
Deferred tax assets	566	428
Restricted cash	352	352
Other assets	725	737
Total assets	\$ 69,074	\$ 79,021
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 4,616	\$ 3,462
Accrued expenses	10,569	12,199
Current portion of deferred revenue	29,006	32,849
Current portion of capital lease obligations	1,737	2,823
Total current liabilities	45,928	51,333
Deferred revenue	238	4,484
Capital lease obligations	914	2,549
Deferred rent	2,391	2,490
Other long-term liabilities	429	678
Total liabilities	49,900	61,534
Commitments and contingencies (Note 9)		
Stockholders' equity :		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.001 par value; 30,000,000 shares authorized; 14,926,429 and 14,663,621 shares issued, respectively; 14,893,927 and 14,631,119 shares outstanding, respectively	15	15
Additional paid-in capital	94,516	91,626
Accumulated deficit	(74,817)	(73,685)
Treasury stock (32,502 common shares, at cost)	0	0
Accumulated other comprehensive loss	(540)	(469)
Total stockholders' equity	19,174	17,487
Total liabilities and stockholders' equity	\$ 69,074	\$ 79,021

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

EXA CORPORATION
Consolidated Statements of Operations
(in thousands, except share and per share data)

	Year Ended January 31,		
	2017	2016	2015
Revenue:			
License revenue	\$ 60,837	\$ 53,499	\$ 49,742
Project revenue	11,743	11,948	11,689
Total revenue	<u>72,580</u>	<u>65,447</u>	<u>61,431</u>
Operating expenses:			
Cost of revenues	19,427	20,117	18,933
Sales and marketing	13,856	10,150	10,668
Research and development	24,319	24,140	21,809
General and administrative	14,582	13,766	12,468
Total operating expenses	<u>72,184</u>	<u>68,173</u>	<u>63,878</u>
Income (loss) from operations	<u>396</u>	<u>(2,726)</u>	<u>(2,447)</u>
Other income (expense), net			
Foreign exchange gain (loss)	166	(322)	344
Interest expense	(140)	(236)	(342)
Interest income	44	12	12
Other income, net	13	7	7
Total other income (expense), net	<u>83</u>	<u>(539)</u>	<u>21</u>
Income (loss) before taxes	479	(3,265)	(2,426)
Provision for income taxes	(1,611)	(1,542)	(16,731)
Net loss	<u>\$ (1,132)</u>	<u>\$ (4,807)</u>	<u>\$ (19,157)</u>
Net loss per share:			
Basic	\$ (0.08)	\$ (0.33)	\$ (1.39)
Diluted	\$ (0.08)	\$ (0.33)	\$ (1.39)
Weighted average shares outstanding used in computing net loss per share:			
Basic	14,779,117	14,520,834	13,735,897
Diluted	14,779,117	14,520,834	13,735,897

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

EXA CORPORATION
Consolidated Statements of Comprehensive Loss
(in thousands)

	<u>Year Ended January 31,</u>		
	<u>2017</u>	<u>2016</u>	<u>2015</u>
Net loss	\$ (1,132)	\$ (4,807)	\$ (19,157)
Other comprehensive loss:			
Foreign currency translation adjustments	(71)	(43)	(466)
Comprehensive loss	<u>\$ (1,203)</u>	<u>\$ (4,850)</u>	<u>\$ (19,623)</u>

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

EXA CORPORATION
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Treasury Stock		Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
	Shares	Amount			Shares	Amount		
Balance at January 31, 2014	13,388,712	\$ 13	\$ 85,201	\$ (49,721)	32,502	\$ 0	\$ 40	\$ 35,533
Stock options exercised and restricted stock units vested	486,032	1	756	—	—	—	—	757
Share-based compensation expense	—	—	2,224	—	—	—	—	2,224
Net loss	—	—	—	(19,157)	—	—	—	(19,157)
Cumulative translation adjustments	—	—	—	—	—	—	(466)	(466)
Balance at January 31, 2015	13,874,744	\$ 14	\$ 88,181	\$ (68,878)	32,502	\$ 0	\$ (426)	\$ 18,891
Stock options exercised, warrants exercised, and restricted stock units vested	788,877	1	1,183	—	—	—	—	1,184
Share-based compensation expense	—	—	2,262	—	—	—	—	2,262
Net loss	—	—	—	(4,807)	—	—	—	(4,807)
Cumulative translation adjustments	—	—	—	—	—	—	(43)	(43)
Balance at January 31, 2016	14,663,621	\$ 15	\$ 91,626	\$ (73,685)	32,502	\$ 0	\$ (469)	\$ 17,487
Restricted stock units vested	27,367	0	—	—	943	(13)	—	(13)
Stock options exercised	235,441	0	877	—	(943)	13	—	890
Share-based compensation expense	—	—	2,013	—	—	—	—	2,013
Net loss	—	—	—	(1,132)	—	—	—	(1,132)
Cumulative translation adjustments	—	—	—	—	—	—	(71)	(71)
Balance at January 31, 2017	14,926,429	\$ 15	\$ 94,516	\$ (74,817)	32,502	\$ 0	\$ (540)	\$ 19,174

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

EXA CORPORATION
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended January 31,		
	2017	2016	2015
Cash flows provided by operating activities:			
Net loss	\$ (1,132)	\$ (4,807)	\$ (19,157)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	4,077	3,520	2,917
Stock-based compensation expense	1,993	2,276	2,230
Deferred rent expense	255	576	(316)
Deferred income taxes	(90)	(73)	15,131
Net change in operating assets and liabilities:			
Accounts receivable	7,779	(4,563)	(188)
Prepaid expenses and other current assets	805	(887)	(609)
Other assets	12	(170)	35
Accounts payable	(349)	1,408	(55)
Accrued expenses	(2,059)	2,158	355
Other liabilities	(298)	(20)	20
Deferred revenue	(8,125)	10,538	(3,436)
Net cash provided by (used in) operating activities	<u>2,868</u>	<u>9,956</u>	<u>(3,073)</u>
Cash flows used in investing activities:			
Purchases of property and equipment	(4,065)	(2,250)	(768)
Change in restricted cash	—	173	—
Net cash used in investing activities	<u>(4,065)</u>	<u>(2,077)</u>	<u>(768)</u>
Cash flows used in financing activities:			
Proceeds from stock option and warrant exercises	890	1,184	757
Acquisition of common stock for tax withholding obligations	(13)	—	—
Payments of capital lease obligations	(2,783)	(2,966)	(2,764)
Net cash used in financing activities	<u>(1,906)</u>	<u>(1,782)</u>	<u>(2,007)</u>
Effect of exchange rate changes on cash	6	(233)	(1,120)
Net (decrease) increase in cash and cash equivalents	<u>(3,097)</u>	<u>5,864</u>	<u>(6,968)</u>
Cash and cash equivalents, beginning of period	27,649	21,785	28,753
Cash and cash equivalents, end of period	<u>\$ 24,552</u>	<u>\$ 27,649</u>	<u>\$ 21,785</u>
Supplemental cash flow disclosures:			
Cash paid for interest	\$ 140	\$ 236	\$ 342
Cash paid for income taxes	\$ 1,691	\$ 1,483	\$ 1,468
Supplemental disclosure of non-cash investing activities:			
Acquisition of equipment through capital leases	\$ 62	\$ 4,351	\$ 1,700
Construction costs funded by landlord tenant improvement allowance	\$ —	\$ 1,051	\$ —
Increase (decrease) in unpaid purchases of property and equipment	\$ 1,586	\$ 621	\$ (122)

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

EXA CORPORATION
Notes to Consolidated Financial Statements
(dollars in thousands except per share amounts)

1. Description of Business

Exa Corporation (the “Company” or “Exa”), a Delaware corporation, develops, sells and supports simulation software and services used primarily by vehicle manufacturers to enhance the performance of their products, reduce product development costs and improve the efficiency of their design and engineering processes. The Company’s solutions enable engineers and designers to augment or replace conventional methods of evaluating designs that rely on expensive and inefficient physical prototypes and test facilities with accurate digital simulations that are more useful, cost effective and timely. The Company’s simulation solutions enable customers to gain crucial insights about design performance early in the design cycle, reducing the likelihood of expensive redesigns and late-stage engineering changes, which result in cost savings and fundamental improvements in the development process. The Company is primarily focused on the ground transportation market, but is also expanding into the aerospace and oil and gas production markets and exploring the application of its capabilities in the chemical processing, architecture, engineering and construction, power generation, biomedical and electronics industries.

Exa has offices and sells directly in the United States and through subsidiaries in France, Germany, Italy, Japan, Korea, China, and the United Kingdom. The Company also conducts business in Sweden, India, Brazil, Russia, Canada, Finland, Spain and Australia.

The Company is subject to a number of risks common to companies in similar stages of development, including dependence on a small number of significant customers for a substantial portion of its revenues, the ability to attract and retain key personnel, competition from substitute products and services from larger companies, the need to continually develop commercially viable products, and risks associated with changes in information technology.

2. Summary of Significant Accounting Policies

Applicable Accounting Guidance

These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”). Any reference in these notes to applicable accounting guidance is meant to refer to the authoritative nongovernmental GAAP as found in the Financial Accounting Standards Board’s (“FASB”) Accounting Standards Codification (“ASC”).

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. On an on-going basis, the Company evaluates its estimates and judgments, including those related to revenue recognition and allowance for doubtful accounts, stock-based compensation expense, intangible assets and other long-lived assets, certain accrued expenses and income taxes. Changes in estimates are recorded in the period in which they become known.

The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results could differ from management’s estimates if future events differ substantially from past experience, or other assumptions, while reasonable when made, do not turn out to be substantially accurate.

Revenue Recognition

The Company generates revenues from the licensing of its software products, typically in the form of one-year term “subscription” or capacity-based licenses that have a defined term, and from project fees for consulting services and training. Licenses for the Company’s software products may be software to be run on the customer’s own computer hardware, or provided in the form of software-as-a-service via the Company’s hosted ExaCLOUD.

Software

The Company recognizes revenues from licensing the software products in accordance with ASC 985-605, *Software Revenue Recognition*. Term licenses typically have a term of one year and allow the customer to buy simulation in the form of a limited amount of simulation capacity on customer installed software and are sold based upon simulation capacity expected to be used within a certain time period—typically not exceeding one year.

The Company typically sells term and capacity-based software licenses combined in a bundled sale. For instance, when customers purchase simulation capacity, they typically also purchase a number of term-based licenses for preparation and analysis software. All of the Company's software licenses include multiple elements such as maintenance and support. Pursuant to the guidance within ASC 985-605, the Company determined that since it does not have vendor-specific objective evidence of the fair value of the individual elements contained in a bundled sale of term and capacity-based software licenses, the arrangement is treated as a single unit of accounting and revenue is recognized ratably on a daily basis over the term of the license agreement, which coincides with the duration of the longest delivered element, maintenance and support services. The Company's arrangements typically do not include rights to carryover any unused capacity beyond the contractual license term or any customer right of return.

Licenses have finite terms that are not extendible at their expiration, and capacity usage is limited by contract to the amount specified. The Company's practice is not to modify existing capacity-based licenses to allow simulation capacity to be added to an existing arrangement. A customer desiring to purchase additional simulation capacity or to license additional users of the Company's preparation and analysis software during the term of the original simulation license does so by entering into a separate arrangement. Revenue from these new arrangements is recognized over the term of the new agreements, which include bundled maintenance and support, and are for a term of less than twelve months, coterminous with the remaining term of the original simulation license.

The Company commences recognition of term license revenue when persuasive evidence of an arrangement exists; delivery of the software or license keys has occurred and all service elements, if bundled or linked, have commenced; contract price is fixed or determinable; and collection of the resulting receivable is considered probable by management. Payments received from customers in advance of revenue recognition are treated as deferred revenue.

If training or consulting service projects are bundled with a software license sale or, as a result of specific facts and circumstances, are determined to be linked with a software license sale, the Company treats this as one arrangement and recognizes revenue ratably on a daily basis over the license period provided that delivery of all elements of the arrangement have commenced.

Software as a service (ExaCLOUD)

The Company recognizes revenue from software-as-a-service arrangements in accordance with ASC 605. ExaCLOUD capacity-based licenses allow the customer to buy simulation capacity as a service hosted by the Company and are sold based upon simulation capacity expected to be used within a certain time period—typically not exceeding one year. The contracts have finite terms that are not extendible at their expiration, and capacity usage is limited by contract to the amount specified. The Company's practice is not to modify existing capacity-based licenses to allow simulation capacity to be added to an existing arrangement. A customer desiring to purchase additional simulation capacity or to license additional users of the Company's preparation and analysis software during the term of the original simulation license must do so by entering into a separate arrangement. In the event that any capacity remains unused at the end of the term of the arrangement, it is recognized as revenue at that time. With the ExaCLOUD solution, customers have access to hosted simulation capacity as well as hosted preparation and analysis software through a web browser. The ExaCLOUD solution includes a "pay-as-you-use" model and an option to purchase a block of simulation capacity upfront to be used over a defined period – typically not exceeding one year. Revenue from these arrangements is recognized as the cloud hosting service is provided.

Projects

The Company also derives revenue from fees for separate, project-based services. The Company's projects are typically short-term in nature and usually complete in less than 90 days. Project pricing is generally either fixed fee or time and material based. The Company recognizes revenue from these service arrangements in accordance with ASC 605. Projects are either sold as one deliverable, or as multiple deliverables with stand-alone value. For single deliverable projects, to the extent that adequate project reporting of time incurred and time to complete records exist, the Company recognizes consulting services revenue as the services are performed under the proportionate performance method. In other situations, for example, providing a customer with an on-site engineer for a defined period of time to provide services at the customer's direction, the Company recognizes revenue ratably over the service period. In situations where the Company is unable to utilize the proportional performance method, for example due to either the lack of adequate documentation of time incurred or to be incurred or a lack of a defined service period, revenue is deferred until the contract is completed.

For projects which have multiple deliverables, each with stand-alone value, the Company recognizes revenue based on ASC 605 and allocates the arrangement consideration based on the relative selling price of the deliverables. For project deliverables, the Company uses its best estimated selling price (“BESP”) as its selling price if vendor-specific objective evidence (“VSOE”) or third-party evidence of selling price (“TPE”) do not exist. If each deliverable does not have stand-alone value, the project is then deemed to be a single unit of accounting.

Multiple element arrangements

Multiple element arrangements may include customer rights to any combination of software, project deliverables, software as a service, maintenance and training.

When more than one element is contained in a single arrangement, the Company first allocates total arrangement revenue based upon relative selling prices into two categories: (1) non-software components, such as services under projects not related to software licenses or software-as-a-service and (2) software components, such as software licenses, maintenance and support, and other software-related services.

Revenue allocated to non-software services is recognized based on ASC 605 and the arrangement consideration is allocated based on the relative selling price of the deliverables. For non-software deliverables, the Company uses its best estimate of selling price (“BESP”) if vendor-specific objective evidence (“VSOE”) or third-party evidence of selling price (“TPE”) do not exist.

Revenue allocated to products sold which meet the definition of software components is recognized based on software accounting guidance provided for in ASC 985-605. Under this guidance, the residual method is used to recognize revenue when a multiple element arrangement includes one or more software related elements to be delivered at a future date and VSOE of fair value of all undelivered elements exists (typically maintenance and other services), but does not exist for the delivered elements (typically the software). However, since the Company cannot establish VSOE for its undelivered elements, the entire software arrangement is deferred and recognized ratably over the contract (maintenance) period. This particularly includes the Company’s term-based licenses since the software license term and the maintenance term are co-terminus.

Foreign Currency Translation

The Company has foreign subsidiaries in the United Kingdom, France, Germany, Italy, Japan, Korea and China. Foreign subsidiary records are maintained in the local currency. Foreign currency effects are accounted for in accordance with ASC 830 – *Foreign Currency Matters*. Other than for the Company’s subsidiary in the United Kingdom, the functional currency for all subsidiaries is the respective local currency. The resulting gains and losses from translation are included as a component of other comprehensive income. Transaction gains and losses and re-measurement of assets and liabilities denominated in currencies other than an entity’s functional currency are included in other income (expense), net. For the Company’s subsidiary in the United Kingdom, which is unable to generate sufficient cash flows in its local currency to sustain operational viability, all assets and liabilities are re-measured into United States dollars, with any resulting unrealized gains or losses being recorded as a component of other income (expense), net.

The Company reviews the functional currencies of its subsidiaries on a quarterly basis in accordance with the “Foreign/Parent Currency” indicators outlined in Appendix A to ASC 830 to determine if any changes should be made.

Foreign currency gain (loss) included in other income (expense), net for the years ended January 31, 2017, 2016 and 2015 was \$166, \$(322) and \$344, respectively.

Concentration of Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to concentration of credit risks are principally cash and cash equivalents and accounts receivable. The Company invests its cash and cash equivalents with high credit quality financial institutions, and consequently, the Company believes that such funds are subject to minimal credit risk. The Company maintains its cash in bank deposit accounts, which at times may exceed federally insured limits, but management believes that the deposits are not exposed to significant credit risk due to the financial position of the depository institutions in which those financial instruments are held.

Concentrated credit risk with respect to accounts receivable is limited to large creditworthy customers. The Company periodically assesses the financial strength of its customers and believes that its accounts receivable credit risk exposure is minimal.

The Company typically does not require collateral from its customers for sales on account. The Company has not experienced significant losses related to receivables from individual customers or groups of customers in any specific industry or geographic region.

The following table provides information concerning customers that individually in the respective fiscal year accounted for greater than 10% of total revenues or 10% of accounts receivable, and their respective percentages of total revenues and accounts receivable, as of and for the years ended January 31, 2017, 2016 and 2015:

	Year Ended January 31,					
	2017		2016		2015	
	Percentage of total revenues	Percentage of accounts receivable at fiscal year end	Percentage of total revenues	Percentage of accounts receivable at fiscal year end	Percentage of total revenues	Percentage of accounts receivable at fiscal year end
Customer A	*	*	*	14%	10%	*
Customer B	*	16%	*	14%	*	*
Customer C	*	*	*	29%	*	*
Customer D	*	10%	*	10%	*	*
Customer E	10%	24%	12%	*	*	*

* less than 10%

Concentration of Other Risks

The Company has two main data center providers, and several support providers (which handle overflow), to host or provide access to hardware for the Company's ExaCLOUD application services to customers. The disruption of these services could have a material adverse effect on the Company's business, financial position, and results of operations.

Cash and Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with an original maturity of 90 days or less, that are not restricted as to withdrawal, to be the equivalent of cash for the purpose of consolidated balance sheet and statement of cash flows presentation. Cash equivalents consisted of money market accounts as of January 31, 2017 and 2016. The Company maintained \$352 of restricted cash related to an operating lease at January 31, 2017 and 2016.

Accounts Receivable and Allowances for Doubtful Accounts

Accounts receivable are stated at the amount management expects to collect from outstanding balances. An allowance for doubtful accounts is provided to the extent that specific accounts receivable are considered to be uncollectible, based on historical experience, known collection issues, and management's evaluation of outstanding accounts receivable at the end of the reporting period. Uncollectible amounts, if any, are written-off against the allowance after all collection efforts have been exhausted. The Company recorded no bad debt expense during fiscal years ended January 31, 2017, 2016 and 2015. Based on management's analysis of its outstanding accounts receivable, and customers' creditworthiness and collection history, the Company concluded that an allowance was not necessary as of January 31, 2017 and 2016.

Property and Equipment, net

Property and equipment, net is stated at cost. Major renewals, additions and betterments are capitalized to property accounts while replacements, maintenance and repairs which do not improve or extend the lives of the respective assets are expensed in the period incurred. Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is reflected in the consolidated statement of operations. Depreciation is computed using the straight-line method over the estimated useful life of each asset, generally as follows:

<u>Asset classification</u>	<u>Estimated Useful Life</u>
Computer equipment	3-5 years
Software	3 years
Office equipment and furniture	3-7 years
Leasehold improvements	Shorter of useful life or remaining life of lease

Leasehold improvements and assets acquired under capital leases are typically amortized using the straight-line method over the shorter of the estimated useful life of the asset or the term of the lease. However, assets acquired under capital leases that contain bargain purchase options that are typically exercised are amortized over the estimated useful life of the asset. Amortization of leasehold improvements and assets acquired under capital leases is included in depreciation expense.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Such indicators include, but are not limited to, cost factors that could have a negative effect on future expected earnings and cash flows, declining financial performance, and legal, regulatory and other relevant entity-specific factors. Recoverability of these assets is measured by comparison of their carrying amounts to the future undiscounted cash flows the assets are expected to generate. If any long-lived assets are considered to be impaired, the impairment recognized equals the amount by which the carrying value of the assets exceeds its estimated fair value. The Company did not identify any indicators of impairment of its long-lived assets during the fiscal years ended January 31, 2017, 2016 and 2015.

Research and Development Expenses

Research and development expense includes costs incurred to develop intellectual property and are charged to expense as incurred. The costs for the development of new software and substantial enhancements to existing software are expensed as incurred until technological feasibility has been established, at which time any additional costs are capitalized. The Company has determined that technological feasibility is established at the time a working model of software is completed. Because the Company believes that, under its current process for developing software, completion of the software is essentially concurrent with the establishment of technological feasibility, no costs have been capitalized to date.

Internal-Use Software

Costs incurred in the research and development of the Company's software products are expensed as incurred. Costs incurred during the application development stage of internal-use software projects, such as those used to develop internal systems, are capitalized. Capitalized costs include external consulting fees and payroll and payroll-related costs for employees in the Company's development and information technology groups who are directly associated with, and who devote time to, the Company's internal-use software projects during the application development stage. Capitalization begins when the planning stage is complete and the Company commits resources to the software project. Amortization of the asset commences when the software is complete and placed in service. The Company amortizes completed internal-use software over its estimated useful life. Costs incurred during the planning, training and post-implementation stages of the software development life-cycle are expensed as incurred. Costs related to upgrades and enhancements of existing internal-use software that increase the functionality of the software are also capitalized.

Advertising Costs

Advertising costs are expensed as incurred. To date, the Company has not incurred material advertising costs.

Income Taxes

Income taxes are accounted for in accordance with ASC 740, *Income Taxes*. ASC 740 requires that deferred tax assets and liabilities are recorded based on temporary differences between the financial statement amounts and the tax basis of assets and liabilities, measured using enacted tax rates in effect for the year in which the differences are expected to reverse. The Company routinely assesses the likelihood that it will be able to realize its deferred tax assets.

In determining the realizability of the net United States federal and state deferred tax assets, the Company considers numerous factors including historical profitability, estimated future taxable income, prudent and feasible tax planning strategies and the industry in which it operates. Management reassesses the realization of the deferred tax assets each reporting period, which resulted in a valuation allowance against the full amount of the Company's United States net deferred tax assets being recorded in fiscal year 2015 and continuing to be recorded as of January 31, 2017 and 2016. To the extent that the financial results of the United States operations improve in the future and the deferred tax assets become more likely than not realizable, the Company will reduce the valuation allowance through earnings.

The Company follows ASC 740-10-25 with regards to accounting for uncertain tax positions, which prescribes a threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken within an income tax return. For each tax position, the enterprise must determine whether it is more likely than not that the position will be sustained upon examination based on the technical merits of the position, including resolution of any related appeals or litigation. A tax position that meets the more likely than not recognition threshold is then measured to determine the amount of benefit to recognize within the financial statements. No benefits may be recognized for tax positions that do not meet the more likely than not threshold.

The Company's intention is to indefinitely reinvest the total amount of its unremitted foreign earnings in the local international jurisdictions, except for instances where the Company can remit such earnings to the United States without an associated net tax cost. As a result, the Company currently does not provide for United States taxes on the unremitted earnings of its international subsidiaries.

Comprehensive Loss and Accumulated Other Comprehensive Loss

ASC 220, *Comprehensive Income*, requires the reporting and display of comprehensive income and its components. Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions, and other events and circumstances from non-owner sources. Accumulated other comprehensive loss consists entirely of foreign currency translation adjustments at January 31, 2017 and 2016.

Stock-Based Compensation

The Company accounts for stock-based compensation in accordance with ASC 718, *Compensation—Stock Compensation*. Under the fair value recognition provisions of ASC 718, share-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service or vesting period. Determining the fair value of equity awards at the grant date requires judgment. The Company estimates the grant date fair value of stock options using the Black-Scholes option valuation model. This option valuation model requires the input of subjective assumptions including: (1) expected life (estimated period of time outstanding) of the options granted, (2) volatility, (3) risk-free rate, (4) dividends and (5) the fair value of the Company's common stock. Because share-based compensation expense is based on awards ultimately expected to vest, it is reduced for estimated forfeitures.

ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures rates differ from those estimates. Forfeitures are estimated based on historical experience.

The Company recognizes windfall tax benefits associated with the exercise of stock options or release of restricted stock units directly to stockholders' equity only when realized. A windfall tax benefit occurs when the actual tax benefit realized by the Company upon an employee's disposition of a share-based award exceeds the deferred tax asset, if any, associated with the award that the Company had recorded. When assessing whether a tax benefit relating to share-based compensation has been realized, the Company follows the "with-and-without" method. Under the with-and-without method, the windfall is considered realized and recognized for financial statement purposes only when an incremental benefit is provided after considering all other tax benefits including the Company's net operating losses. The with-and-without method results in the windfall from share-based compensation awards always being effectively the last tax benefit to be considered. Consequently, the windfall attributable to share-based compensation will not be considered realized in instances where our net operating loss carryover (that is unrelated to windfalls) is sufficient to offset the current year's taxable income before considering the effects of current-year windfalls.

Net Loss per Share

Basic earnings per share ("EPS") is computed by dividing income available to common stockholders by the weighted-average number of shares of common stock outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS except that the denominator is increased to include the number of additional shares of common stock that would have been outstanding (using the treasury stock method) if securities convertible into or exercisable for potentially dilutive shares of common stock (stock options, restricted stock units and warrants) had been converted into or exercisable for such shares of common stock, and if such assumed conversion or exercise would have been dilutive. Exercises or conversions that would have been anti-dilutive are excluded from the calculation of diluted EPS.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers*, which supersedes nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle, as a result of which more judgment and estimates may be required within the revenue recognition process than are required under existing GAAP. The standard is effective for annual periods beginning after December 15, 2018, and interim periods therein. The two permitted transition methods under the new standard are: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures).

Though the Company continues to evaluate the impact of its pending adoption of this standard, the Company plans to adopt the standard using the modified retrospective approach with the cumulative effect of initially adopting recognized at the date of adoption. The standard is expected to have a significant impact on the way the Company accounts and contracts for its on-premise software license contracts. Accounting for revenue related to services and ExaCLOUD offerings is expected to remain substantially unchanged due to the over-time nature of such performance obligations. Due to the complexity of certain of the Company's license contracts, the actual revenue recognition treatment required under the standard may be dependent on contract-specific terms at the time of sale and

adoption of the new standard. The Company is also assessing the impact of capitalizing costs associated with ongoing customer contracts, specifically commission payments.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This standard requires the recognition of lease assets and liabilities for all leases, with certain exceptions, on the balance sheet. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. This ASU is effective for annual periods beginning after December 15, 2018, and for interim periods therein. The Company is currently evaluating the requirements of this ASU and has not yet determined the impact on its consolidated financial results.

In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718)—Improvements to Employee Share-Based Payment Accounting*. This standard simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, statutory tax withholding requirements, and classification on the statement of cash flows. The provisions of this ASU are effective for annual periods beginning after December 15, 2016, and for interim periods therein. The Company has evaluated this standard and believes that when it adopts the standard in the first quarter of fiscal year 2018, it will not have a material impact on the Company's consolidated financial results. As part of the adoption, the Company expects to cease applying a forfeiture rate estimate when calculating share-based compensation expense, which is not expected to result in a material adjustment to retained earnings in fiscal year 2018. Additionally, while the Company has \$1,199 of previously unrecognized excess tax benefits attributable to stock option exercises, the adoption is not expected to result in any adjustment to retained earnings because of the Company's full valuation allowance in the United States. Excess tax benefits for share-based payments will now be included in net operating cash rather than in net financing cash. These changes related to excess tax benefits will be applied prospectively in accordance with this standard and prior periods will not be adjusted.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230)—Restricted Cash*. This standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash and restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. Early adoption is permitted. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, and for interim periods therein. The Company is currently evaluating the requirements of this ASU, but does not expect it to have a material impact on the Company's consolidated financial results.

3. Property and Equipment, net

Property and equipment, net consist of the following:

	January 31, 2017	January 31, 2016
Computer software and equipment	\$ 23,321	\$ 17,964
Office equipment and furniture	1,549	1,349
Leasehold improvements	1,629	1,562
Construction-in-process	95	169
Total property and equipment	26,594	21,044
Less accumulated depreciation	(12,566)	(9,012)
Property and equipment, net	<u>\$ 14,028</u>	<u>\$ 12,032</u>

Depreciation expense was \$3,726, \$3,170 and \$2,567 for the fiscal years ended January 31, 2017, 2016 and 2015, respectively. Included in computer software and equipment and office equipment and furniture is equipment held pursuant to capital leases with costs of \$14,820 and \$14,809 and accumulated depreciation of \$9,266 and \$6,808 as of January 31, 2017 and 2016, respectively.

4. Acquired Intangible Assets

Intangible assets acquired in a business combination are recorded under the purchase method of accounting at their estimated fair values at the date of acquisition. The Company amortizes acquired intangible assets over their estimated useful lives. The following table reflects the carrying value of intangible assets and related estimates of useful lives as of January 31, 2017:

	<u>Useful Life (Years)</u>	<u>Cost</u>	<u>Accumulated Amortization</u>	<u>Net Book Value</u>
Intellectual property	10	\$ 3,505	\$ (1,811)	\$ 1,694
Access to facilities contract	1	38	(38)	—
Total		<u>\$ 3,543</u>	<u>\$ (1,849)</u>	<u>\$ 1,694</u>

The following table reflects the carrying value of intangible assets and related estimates of useful lives as of January 31, 2016:

	<u>Useful Life (Years)</u>	<u>Cost</u>	<u>Accumulated Amortization</u>	<u>Net Book Value</u>
Intellectual property	10	\$ 3,505	\$ (1,461)	\$ 2,044
Access to facilities contract	1	38	(38)	—
Total		<u>\$ 3,543</u>	<u>\$ (1,499)</u>	<u>\$ 2,044</u>

Amortization expense of intangible assets was \$350 for each of the fiscal years ended January 31, 2017, 2016 and 2015.

The following table presents the expected future amortization expense related to the Company's acquired intangible assets for the next five fiscal years and thereafter as of January 31, 2017:

2018	\$ 351
2019	350
2020	351
2021	350
2022	292
	<u>\$ 1,694</u>

5. Fair Value Measurements

The provisions of fair value accounting establish a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access.

Level 2—Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly.

Level 3—Valuations based on inputs that are unobservable and significant to the overall fair value measurement and that are based on management's best estimate of inputs market participants would use for pricing the asset or liability at the measurement date, including assumptions about risk.

The availability of observable inputs can vary among the various types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the overall fair value measurement.

The following table summarizes the Company's fair value hierarchy for its financial assets and liabilities measured at fair value as of January 31, 2017:

	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Assets:				
Money market funds	\$ 10,058	\$ 10,058	\$ —	\$ —

The following table summarizes the Company's fair value hierarchy for its financial assets and liabilities measured at fair value as of January 31, 2016:

	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Assets:				
Money market funds	\$ 11,019	\$ 11,019	\$ —	\$ —

6. Accrued Expenses

Accrued expenses consist of the following:

	<u>January 31, 2017</u>	<u>January 31, 2016</u>
Accrued payroll	\$ 2,207	\$ 1,828
Sales and value added taxes	2,615	4,075
Accrued commissions and bonuses	2,871	3,900
Accrued income taxes payable	763	541
Deferred rent, current portion	540	186
Legal and professional	673	805
Other	900	864
Total accrued expenses	<u>\$ 10,569</u>	<u>\$ 12,199</u>

7. Deferred Rent

Payment escalations, rent holidays and lease incentives specified in the Company's non-cancelable operating lease and hosting agreements are recognized on a straight-line basis over the terms of the agreements. The differences arising from straight-line expense recognition and cash payments are recorded as deferred rent in the accompanying consolidated balance sheets. Tenant leasehold improvement allowances received from landlords are recorded as deferred rent and are amortized as operating expense over the applicable lease terms.

Deferred rent consists of the following:

	<u>January 31, 2017</u>	<u>January 31, 2016</u>
Leasehold improvement incentive	\$ 1,582	\$ 1,839
Non-cash rent expense	1,349	837
Total deferred rent	2,931	2,676
Less current portion included in accrued expenses	(540)	(186)
Deferred rent, net of current portion	<u>\$ 2,391</u>	<u>\$ 2,490</u>

As discussed in Note 9, the Company entered into an amendment to its corporate headquarter lease in Burlington, Massachusetts effective July 1, 2015. The amendment provided for a tenant improvement allowance of up to \$1,681 to cover renovations made to the Company's leased space over the remainder of fiscal year 2016. As of January 31, 2016, the Company recorded the full amount of the tenant improvement allowance as an increase to deferred rent. Of the renovations costs covered by the allowance, the Company paid for approximately \$631, and accordingly, recorded a receivable from the landlord for this amount which is included in other current assets in the accompanying consolidated balance sheet. The \$1,050 balance of these costs was funded by the landlord and is recorded as leasehold improvements within property and equipment, net in the accompanying consolidated balance sheet.

8. Warrants for Preferred Stock

In connection with its entry in January 2011 into a Loan and Security Agreement with Gold Hill Capital 2008, L.P. and Massachusetts Capital Resource Company, and its subsequent amendments and extensions, the Company issued various warrants to

purchase an aggregate 1,190,000 shares of the Company's Series G Convertible Preferred Stock at an exercise price of \$0.94 per share, or 183,076 shares of common stock at an exercise price of \$6.11 per share, giving effect to the conversion to common stock of all shares of Series G Convertible Preferred Stock in connection with the Company's initial public offering and the 1-for-6.5 reverse stock split effected with respect to the Company's common stock on June 8, 2012. No warrants remained outstanding as of January 31, 2017 or 2016.

9. Commitments and Contingencies

Capital Leases

The Company leases certain equipment under capital leases expiring on various dates through fiscal 2022. Future minimum lease payments under capital lease commitments as of January 31, 2017 are as follows:

Year ended January 31,	
2018	1,781
2019	890
2020	14
2021	13
2022	6
Total future minimum lease payments	2,704
Less: Interest	53
Present value of future minimum lease payments	2,651
Current portion of capital lease obligation	1,737
Long-term capital lease obligation	<u>\$ 914</u>

Operating Leases

Effective July 1, 2015, the Company entered into an amendment to the lease for its corporate headquarters space in Burlington, Massachusetts. The amendment extends the lease term, originally set to expire in March 2016, through March 2023 and reduces the leased space from 65,941 square feet to 44,241 square feet. The 21,700 square foot reduction primarily relates to first floor space that had been subleased by the Company to a subtenant, and under the terms of the amendment, the landlord assumed the sublease effective July 1, 2015. The amendment also provided for a tenant improvement allowance of up to \$1,681 to cover renovations that were being made to the retained second floor space over the remainder of fiscal year 2016.

In conjunction with the relinquishment of the first floor space, the amendment reduced the Company's required security deposit letter of credit from \$525 to \$352.

In conjunction with the purchase of additional computer processor equipment for its main high performance computing data center, effective as of September 1, 2015, the Company's hosting and support arrangement for that facility was expanded to account for the new equipment.

During the second quarter of fiscal year 2017, the Company entered into a hosting and support arrangement for a second high performance computing data center.

The Company leases office facilities for all its other locations under operating leases expiring on various dates through April 2024. The Company also leases certain office equipment under operating leases that expire on various dates through February 2018. As of January 31, 2017, after taking into consideration the above amendments, total future minimum lease payments under non-cancelable lease and hosting arrangements are as follows:

Year ended January 31,	
2018	\$ 5,949
2019	5,449
2020	3,889
2021	2,055
2022	2,068
Thereafter	2,808
	<u>\$ 22,218</u>

Rent expense is calculated on a straight-line basis over the term of the lease. Rent expense recognized under all operating leases totaled \$2,732, \$2,740 and \$2,699 for the fiscal years ended January 31, 2017, 2016 and 2015, respectively. Sub-rental income was \$0, \$159 and \$382 for the fiscal years ended January 31, 2017, 2016 and 2015, respectively.

Purchase Obligations

The Company has minimum annual purchase commitments for certain sublicenses. As of January 31, 2017, the obligations payable relating to these commitments is \$600 for each of the fiscal years 2018 and 2019.

Legal Contingencies

From time to time the Company is involved in legal proceedings arising in the ordinary course of business. There is no litigation pending that could, individually or in the aggregate, have a material adverse effect on the Company's financial position, results of operations, or cash flows.

Guarantees and Indemnification Obligations

The Company enters into standard indemnification agreements in the ordinary course of business. Pursuant to these agreements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally the Company's business partners or customers, in connection with any United States patent, or any copyright or other intellectual property infringement claim by any third party with respect to the Company's products. The term of these indemnification provisions is generally perpetual after execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these agreements is unlimited.

Based on historical experience and information known as of January 31, 2017 and 2016, the Company has not recorded any liabilities for the above guarantees and indemnities.

10. Stock-Based Compensation

Summary of Plans

The Company's equity compensation plans generally provide the board of directors the authority to grant incentive stock options, nonqualified stock options, restricted stock awards, unrestricted stock awards, performance share awards, restricted stock units, and stock appreciation rights (collectively, options) and to select the employees and consultants to whom options are granted and determine the terms of each option, including (i) the number of shares of common or preferred stock subject to the option, (ii) when the option becomes exercisable, (iii) the option exercise price, which, in the case of incentive stock options, must be at least 100% (110% in the case of incentive stock options granted to a stockholder owning in excess of 10% of the Company's common stock) of the fair market value of the stock as of the date of grant and (iv) the duration of the option (which, in the case of incentive stock options, may not be less than five years or exceed 10 years). Options generally expire 10 years from the date of issuance.

The Company's common and preferred stock incentive plans are summarized as follows (the table reflects options for preferred stock on an as converted to common stock basis):

Plan	Authorized and Reserved	Outstanding January 31, 2017	Available to Issue
1999 Series G Convertible Preferred Nonqualified Stock Option Plan (1)	384,615	—	—
2005 Series G Convertible Preferred Stock Incentive Plan (1)	1,846,153	4,614	—
2007 Stock Incentive Plan (1)	1,076,923	614,856	—
2011 Employee Stock Purchase Plan (2)	461,538	—	461,538
2011 Stock Incentive Plan	1,769,230	1,575,073(3)	99,101
	<u>5,538,459</u>	<u>2,194,543</u>	<u>560,639</u>

(1) Effective upon the consummation of its initial public offering on July 3, 2012, the Company ceased issuing awards under any plan other than its 2011 Stock Incentive Plan.

(2) The 2011 Employee Stock Purchase Plan was approved by the Company's shareholders on August 3, 2011. As of January 31, 2017, no shares have been issued out of this plan.

- (3) Outstanding share amount does not include 43,887 options exercised and 51,169 restricted stock units vested, net of 943 shares with held to cover withholding tax obligations.
- (4) Outstanding awards include 36,582 restricted stock units granted during the year to certain members of the board of directors, which will fully vest in June 2017.

In August 2016, the Company granted to one of its officers an option to purchase 75,000 shares of common stock as an inducement award pursuant to Rule 5635(c)(4) of the Nasdaq Global Select Market. This option award was issued outside of the plans described above.

Grant-Date Fair Value

All options have been granted at exercise prices not less than the fair value of the underlying shares on the date of grant. The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of stock options issued. The Black-Scholes model requires estimates regarding volatility, expected life of the award, the risk-free rate of return, dividend yields, and estimated forfeitures of awards during the service period.

The Company computes volatility under the “calculated value method” of ASC 718, *Compensation—Stock Compensation*. As the Company does not have a trading history for its common stock prior to its initial public offering or a significant trading range for its common stock trading since the initial public offering, the Company estimates the expected price volatility for its common stock by taking the average historic price volatility for selected industry peers based on daily price observations over a period equivalent to the expected term of the stock options granted. The Company’s industry peers consist of several public companies that are similar to the Company in size, stage of life cycle and financial leverage. The Company intends to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of its common stock becomes available, or unless circumstances change such that the currently utilized companies are no longer similar to the Company, in which case, more suitable companies with publicly available share prices will be utilized in the calculation.

Since adopting ASC 718, the Company has been unable to use historical employee exercise and option expiration data to estimate the expected term assumption for the Black-Scholes grant-date valuation. As such, the Company has utilized the “simplified” method, as prescribed by Staff Accounting Bulletin No. 107, *Share-Based Payment*, to estimate on a formula basis the expected term of its stock options considered to have “plain vanilla” characteristics.

The Company utilizes the Federal Reserve Board’s published Treasury Constant Maturity rate which most closely matches the option term. As an example, for a 6.25 year term, the Company would use the 7-year rate coinciding with the option issuance date.

The Company has never paid dividends and does not currently intend to pay dividends, and thus has assumed a dividend yield of zero.

The Company estimates potential forfeitures of stock grants and adjusts compensation cost recorded accordingly. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ, or are expected to differ, from such estimates. Changes in estimated forfeitures will be recognized through a cumulative catch-up adjustment in the period of change and will also impact the amount of stock compensation expense to be recognized in future periods.

The Company considers the indirect effect of income tax benefits from stock-based compensation in arriving at its income tax provision. In addition, the Company has elected to recognize excess income tax benefits from stock-based compensation as an addition to paid-in capital only if an incremental income tax benefit would be realized by applying the with-and-without method. Under this method, the excess tax benefit is considered realized and recognized for financial statement purposes only when an incremental benefit is provided after considering all other tax benefits including the Company’s net operating losses. The Company measures the tax benefit associated with excess tax deductions by multiplying the excess tax over book deduction by the statutory tax rates.

The fair value of common stock service-based options for employees and directors is estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions used:

	Year Ended January 31,		
	2017	2016	2015
Expected life (years)	6.25	6.25	6.25
Risk-free interest rate	1.58%	1.96%	2.15%
Expected volatility	34.9%	36.8%	47.3%
Expected dividend yield	0.0%	0.0%	0.0%

A summary of the changes in common stock options issued is as follows (the table reflects options for preferred stock on an as converted to common stock basis):

	Year Ended January 31, 2017		Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (1)
	Number of Options	Weighted Average Exercise Price		
Outstanding—beginning of period	2,112,104	\$ 9.79		
Granted	205,100	13.99		
Exercised	(236,384)	3.77		
Cancelled	(212,359)	9.90		
Outstanding—end of period	<u>1,868,461</u>	\$ 11.00	6.3	\$ 8,406
Exercisable—end of period	<u>1,346,720</u>	\$ 10.58	5.6	\$ 6,622
Vested or Expected to Vest—end of period	<u>1,821,548</u>	\$ 11.00	6.2	\$ 8,190

- (1) The aggregate intrinsic value was calculated based on the positive difference between the fair value of the Company's stock on January 31, 2017 and the exercise price of the underlying options.

The following table summarizes information relating to stock options granted and exercised:

	Year Ended January 31,		
	2017	2016	2015
Weighted average fair value of options granted	\$ 13.99	\$ 10.68	\$ 10.67
Aggregate intrinsic value of options exercised (1)	\$ 2,287	\$ 6,812	\$ 5,503

- (1) The aggregate intrinsic value was calculated based on the positive difference between the fair value of the Company's stock at exercise and the exercise price of the underlying options.

In June 2016, 24,867 restricted stock units, granted to certain members of the board of directors, vested with a fair market value of \$283. The Company also granted 36,582 restricted stock units to certain members of the board of directors, which will fully vest in June 2017.

A summary of the changes in restricted stock units issued under all of the existing stock plans is as follows:

	Year Ended January 31, 2017		Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (1)
	Number of RSUs	Weighted Average Grant Date Fair Value		
Outstanding—beginning of period	24,867	\$ 11.39		
Awarded	403,582 (2)	12.96		
Vested	(27,367)	11.68		
Forfeited	—	—		
Outstanding—end of period	<u>401,082</u>	\$ 12.95	0.7	\$ 6,217
Vested or Expected to Vest—end of period	<u>401,082</u>	\$ 12.95	0.7	\$ 6,217

- (1) The aggregate intrinsic value was calculated based on the positive difference between the fair value of the Company's stock on January 31, 2017 and the grant price of the underlying awards.
(2) Includes 337,000 performance-based restricted stock units granted in the first quarter of fiscal year 2017

The following table summarizes information relating to restricted stock units granted and vested:

	Year Ended January 31,		
	2017	2016	2015
Weighted average fair value of awards granted	\$ 12.96	\$ 11.39	\$ 9.22
Aggregate intrinsic value of awards vested (1)	\$ 21	\$ 46	\$ —

- (1) The aggregate intrinsic value was calculated based on the positive difference between the fair value of the Company's stock on the date of vest and the grant price of the underlying awards.

Stock-Based Compensation Expense

For standard service-based stock options, the Company records stock-based compensation expense over the estimated service/vesting period. The amount of stock-based compensation expense recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest.

Performance-based stock options are recognized as expense over the requisite service period when it becomes probable that performance measures triggering vesting will be met. During fiscal year 2015, the Company granted performance-based options with vesting criteria tied to performance metrics in fiscal years 2015, 2016 and 2017. Required metrics for certain grants eligible to vest were achieved in fiscal years 2015 and 2016, but none were achieved in 2017. Accordingly, the Company has recorded \$289, \$410 and \$50, respectively, in share-based compensation expense associated with these options in fiscal years 2015, 2016 and 2017.

During the first quarter of fiscal year 2017, the Company granted performance-based restricted stock units ("PSUs") with vesting criteria tied to performance metrics in fiscal year 2017. PSUs are recognized as expense when it becomes probable that performance measures triggering vesting will be achieved. As of January 31, 2017, the Company has concluded that it is not probable that any of the required metrics for vesting of the PSUs will be achieved. As a result, the Company has not recognized any share-based compensation expense associated with these awards.

Total stock-based compensation expense was recorded within the consolidated statement of operations for the fiscal years ended January 31, 2017, 2016 and 2015 as follows:

	Year Ended January 31,		
	2017	2016	2015
Cost of revenues	\$ 162	\$ 234	\$ 209
Sales and marketing	269	405	413
Research and development	792	886	865
General and administrative	770	751	743
Total	\$ 1,993	\$ 2,276	\$ 2,230

The total unrecognized compensation cost related to outstanding stock options is \$7,132 at January 31, 2017. This amount is expected to be recognized over a weighted-average period of 1.44 years.

11. Income Taxes

The components of income (loss) before income taxes are as follows:

	Year Ended January 31,		
	2017	2016	2015
United States	\$ (1,274)	\$ (4,201)	\$ (3,682)
Foreign	1,753	936	1,256
Income (loss) before taxes	\$ 479	\$ (3,265)	\$ (2,426)

The Company's effective tax rate varies from the U.S. federal statutory rate as follows:

	Year Ended January 31,		
	2017	2016	2015
United States federal income tax rate	34.0%	34.0%	34.0%
State taxes, net of federal benefit	(0.6)	0.8	0.5
Meals and entertainment	10.8	(1.1)	(1.9)
Stock-based compensation	69.0	(12.3)	(20.4)
Executive compensation	31.3	(3.2)	(3.4)
United States federal and state credits	(163.5)	26.2	33.3
Change in valuation allowance	406.5	(89.5)	(689.8)
Change in uncertain tax positions	(46.3)	(2.1)	—
Foreign taxes and rate differential	(6.8)	1.0	(0.8)
Write-off of tax attributes	—	—	(40.7)
Other	1.9	(1.0)	(0.4)
Total	<u>336.3%</u>	<u>(47.2)%</u>	<u>(689.6)%</u>

Significant components of the Company's deferred tax assets and liabilities are as follows:

	January 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	\$ 10,347	\$ 9,832
Business credit carryforwards	9,593	7,685
Accrued expenses	1,155	1,129
Amortization	221	179
Stock-based compensation	1,048	824
Deferred revenue	—	253
Deferred rent	1,041	946
Unrealized foreign exchange losses	11	151
Gross deferred tax assets	23,416	20,999
Valuation allowance	(21,929)	(19,962)
Total deferred tax assets	<u>1,487</u>	<u>1,037</u>
Deferred tax liabilities:		
Depreciation	(873)	(785)
Deferred revenue	(272)	—
Total deferred tax liabilities	<u>(1,145)</u>	<u>(785)</u>
Net deferred tax assets	<u>\$ 342</u>	<u>\$ 252</u>

The components of the provision for income taxes are as follows:

	Year Ended January 31,		
	2017	2016	2015
Current:			
Federal	\$ (1,118)	\$ (1,088)	\$ (989)
State	3	4	(6)
Foreign	(592)	(543)	(593)
Total current	<u>(1,707)</u>	<u>(1,627)</u>	<u>(1,588)</u>
Deferred:			
Federal	1,524	2,437	2,365
State	443	484	(836)
Foreign	96	85	64
Change in valuation allowance	(1,967)	(2,921)	(16,736)
Total deferred	<u>96</u>	<u>85</u>	<u>(15,143)</u>
Total provision for income taxes	<u>\$ (1,611)</u>	<u>\$ (1,542)</u>	<u>\$ (16,731)</u>

The income tax provision for fiscal years 2017 and 2016 primarily consists of the tax effects of foreign operating results and foreign withholding taxes. The income tax provision for fiscal year 2015 includes a \$14,423 non-cash charge to record a valuation allowance against our United States net deferred tax assets and a \$788 non-cash write-off of state deferred taxes.

During fiscal year 2015, the Company determined that the United States federal and state net deferred tax assets were no longer more-likely-than-not realizable. As a result, the Company recorded a deferred tax provision of \$14,423 to establish a valuation allowance on the full amount of the United States federal and state net deferred tax assets. In determining the realizability of these assets, the Company considered numerous factors including historical profitability, estimated future taxable income, prudent and feasible tax planning strategies and the industry in which it operates. Through the three months ended April 30, 2014, the Company's results reflected a three-year cumulative loss position in the United States; prior thereto, the historical results reflected a three-year cumulative profit. Reflecting management's plans to continue investing in the business for future growth, the Company continued in a three-year cumulative loss position through the remainder of fiscal year 2015 and throughout fiscal years 2016 and 2017. The Company's cumulative historical loss position at April 30, 2014 and projected cumulative loss position resulted in significant negative evidence which caused management to modify its assessment of the Company's deferred tax assets, concluding that it no longer was more likely than not that these deferred tax assets would be realized and thus, a valuation allowance was necessary against the full amount of our United States net deferred tax assets; this conclusion has continued through January 31, 2017.

Most of the Company's revenues are generated from ground transportation customers outside the United States but a significantly disproportionate amount of the Company's operating expenses, including investments in future products, are incurred in the United States, causing the results of operations in the United States to reflect losses during this period of investment.

Management reassesses the realization of the deferred tax assets each reporting period. To the extent that the financial results of the Company's United States operations improve and the deferred tax asset becomes realizable, the Company will reduce the valuation allowance through earnings.

Under Section 382 of the Internal Revenue Code of 1986, as amended, substantial changes in the Company's ownership may limit the amount of net operating loss carryforwards that can be utilized annually in the future to offset its United States federal taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of the Company of more than 50% within a three-year period. During the first quarter of fiscal year 2015, management determined that the Company had experienced an ownership change for purposes of Section 382. This ownership change resulted in annual limitations to the amount of net operating loss carryforwards that can be utilized to offset future taxable income, if any, at the federal level. The annual limit was approximately \$14,032 for fiscal year 2015, \$16,758 for each of fiscal years 2016 through 2019, \$8,046 for fiscal year 2020 and \$6,366 for each fiscal year thereafter. The ownership change also resulted in the loss of the Company's ability to utilize \$788 of its \$819 of state net operating loss carryforwards, credits and other state attributes, which resulted in a write-off of the \$788 of state deferred tax assets. Management performed an evaluation of ownership change in fiscal years 2016 and 2017 and determined the ownership change in each of those years to be less than 50%.

As of January 31, 2017, the Company had United States federal net operating loss carryforwards of \$30,265, which will begin to expire in fiscal year 2018, and state net operating loss carryforwards of \$1,308, which will begin to expire in fiscal year 2025. The Company has an additional \$1,199 of federal and state net operating losses not reflected above (net of tax), that are attributable to stock option exercises, which will be recorded as an increase in additional paid-in capital on the Company's consolidated balance sheet once they are "realized" in accordance with ASC 718, *Compensation—Stock Compensation*. As of January 31, 2017, the Company had federal tax credit carryforwards of approximately \$8,796, which will begin to expire in fiscal year 2018, and state tax research and development credit carryforwards of approximately \$797, which will begin to expire in fiscal year 2030.

Accounting for income taxes requires a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if, based on the technical merits, it is more likely than not that the position will be sustained upon audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon ultimate settlement. The Company reevaluates these uncertain tax positions on a quarterly basis. This evaluation is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit and new audit activity. Any changes in these factors could result in the recognition of a tax benefit or an additional charge to the tax provision. The Company has gross unrecognized tax benefits of \$2,557 and \$2,836 at January 31, 2017 and 2016, respectively, of which \$2,160 and \$2,163, if recognized respectively, would result in a reduction to the Company's effective tax rate.

A tabular roll forward of the Company's uncertainties in its income tax provision liability is presented below:

	Year Ended January 31		
	2017	2016	2015
Gross balance at February 1	\$ 2,836	\$ 2,442	\$ 2,167
Additions based on tax positions related to the current year	23	485	648
Reductions for tax positions of prior years	(302)	(91)	(373)
Gross balance at January 31	<u>\$ 2,557</u>	<u>\$ 2,836</u>	<u>\$ 2,442</u>

The Company classifies interest and penalties related to unrecognized tax benefits as income tax expense. These amounts are not reflected in the reconciliation above. The total amount of interest and penalties related to uncertain tax positions and recognized in the balance sheet as of January 31, 2017 and 2016 was \$3 and \$97, respectively.

The Company does not expect that its unrecognized tax benefit will change significantly within the next twelve months. The Company and one or more of its subsidiaries file United States federal income tax returns and tax returns in various state and foreign jurisdictions. With limited exceptions, the Company is no longer subject to federal, state or local examinations for years prior to January 31, 2012. However, carryforward attributes that were generated prior to January 31, 2013 may still be adjusted upon examination by federal, state or local tax authorities if they either have been or will be used in a future period.

The Company's intention is to indefinitely reinvest the total amount of its unremitted earnings in the local international jurisdiction, except for instances in which the Company can remit such earnings to the United States without an associated net tax cost. Events that could trigger a tax might include United States acquisitions or other investments funded by cash distributions or loans from a foreign subsidiary. Because of the complexity of United States and foreign tax rules applicable to the distribution of earnings from foreign subsidiaries to United States legal entities, the determination of the unrecognized deferred tax liability on these earnings is not practicable. The Company has not provided for United States taxes on the unremitted earnings of its international subsidiaries of \$6,616.

12. Net Loss per Share

Basic earnings per share ("EPS") is computed by dividing income available to common stockholders by the weighted-average number of shares of common stock outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS except that the denominator is increased to include the number of additional shares of common stock that would have been outstanding (using the treasury stock method) if securities convertible into or exercisable for potentially dilutive shares of common stock (stock options, restricted stock units and warrants) had been converted into or exercisable for such shares of common stock, and if such assumed conversion or exercise would have been dilutive. Exercises or conversions that would have been anti-dilutive are excluded from the calculation of diluted EPS.

The following table sets forth the components of the computation of basic and diluted net loss per common share for the periods indicated:

	Year Ended January 31,		
	2017	2016	2015
Numerator:			
Net loss	\$ (1,132)	\$ (4,807)	\$ (19,157)
Denominator:			
Weighted average common shares outstanding, basic and diluted	14,779,117	14,520,834	13,735,897
Basic and diluted net loss per share	<u>\$ (0.08)</u>	<u>\$ (0.33)</u>	<u>\$ (1.39)</u>

All of the Company's outstanding stock options and unvested restricted stock unit awards were excluded from the computation of diluted net loss per share for the years ended January 31, 2017, 2016 and 2015 because including them would have had an anti-dilutive effect due to the net loss position of the Company. At January 31, 2017, 2016 and 2015, the Company had outstanding options, unvested restricted stock unit awards and warrants of 1,932,543, 2,136,970 and 2,851,394, respectively.

13. Geographic and Segment Information

ASC 280, *Segment Reporting*, establishes standards for reporting information regarding operating segments in annual financial statements and requires selected information of those segments to be presented in annual and interim reports issued to stockholders.

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker, or decision-making group, in making decisions on how to allocate resources and assess performance. The Company's chief decision maker, as defined under ASC 280, is a combination of the chief executive officer and the chief financial officer. The Company views its operations and manages its business as one operating segment.

Revenues by geographic location in total and as a percentage of total revenues are as follows:

	Year Ended January 31,					
	2017		2016		2015	
	Revenue	Percentage of Revenue	Revenue (1)	Percentage of Revenue	Revenue (1)	Percentage of Revenue
United States	\$ 18,752	25.8%	\$ 18,786	28.7%	\$ 15,054	24.5%
Germany	10,719	14.8	9,376	14.3	11,494	18.7
Japan	14,673	20.2	10,306	15.7	9,598	15.6
France	7,958	11.0	7,445	11.4	9,020	14.7
Korea	5,747	7.9	5,557	8.5	5,388	8.8
United Kingdom	6,984	9.6	7,401	11.3	5,058	8.2
China	3,537	4.9	2,578	3.9	1,926	3.1
Sweden	1,810	2.5	1,928	2.9	2,165	3.5
Italy	1,595	2.2	1,349	2.1	904	1.5
Other	805	1.1	721	1.2	824	1.4
	<u>\$ 72,580</u>	<u>100.0%</u>	<u>\$ 65,447</u>	<u>100.0%</u>	<u>\$ 61,431</u>	<u>100.0%</u>

(1) Certain prior year amounts have been reclassified to conform to fiscal 2017 presentation. These changes had no impact on previously reported results of operations or shareholders' equity.

Net long-lived assets, consisting of property and equipment, net, are subject to geographic risks because they are generally difficult to move and to effectively utilize in another geographic area in a reasonable time period and because they are relatively illiquid. Net long-lived assets by principal geographic area were as follows:

	January 31, 2017	January 31, 2016
United States	\$ 13,412	\$ 11,346
France	222	388
Germany	145	110
Japan	128	116
Other	121	72
	<u>\$ 14,028</u>	<u>\$ 12,032</u>

14. Employee Benefit Plans

401(k) Plan

The Company has an employee benefit plan for its United States-based employees under Section 401(k) of the Internal Revenue Code. The Plan allows all eligible employees to make contributions up to a specified percentage of their compensation. Under the Plan, the Company may, but is not obligated to, match a portion of the employee contribution up to a defined maximum. For the years ended January 31, 2017, 2016 and 2015, the Company made total contributions of \$654, \$589 and \$590, respectively.

Foreign Defined Contribution Plans

The Company, through its wholly owned subsidiaries, contributes to local defined contribution plans that provide retirement benefits for the Company's foreign-based employees. For the years ended January 31, 2017, 2016 and 2015, the Company, through its subsidiaries, made contributions of \$1,185, \$1,072 and \$1,123, respectively, to these plans.

15. Quarterly Results of Operations (Unaudited)

The following table sets forth the Company's unaudited operating results for each of the eight quarters in the two-year period ended January 31, 2017. The information is derived from the Company's unaudited financial statements. In the opinion of management, the Company's unaudited financial statements include all adjustments (consisting only of normal recurring adjustments)

necessary for a fair presentation thereof. The financial information presented for the interim periods has been prepared in a manner consistent with the Company's accounting policies described in Note 2 and should be read in conjunction therewith. Operating results for interim periods are not necessarily indicative of the results that may be expected for a full-year period or any future period.

	Fiscal Year 2017 Quarter Ended				Fiscal Year 2016 Quarter Ended			
	April 30, 2016	July 31, 2016	October 31, 2016	January 31, 2017	April 30, 2015	July 31, 2015	October 31, 2015	January 31, 2016
License revenue	\$ 14,059	\$ 14,810	\$ 15,967	\$ 16,001	\$ 12,242	\$ 12,977	\$ 13,966	\$ 14,314
Project revenue	2,726	2,302	3,191	3,524	2,526	2,478	2,998	3,946
Total revenues	16,785	17,112	19,158	19,525	14,768	15,455	16,964	18,260
Operating expenses:								
Cost of revenues	4,804	4,632	4,904	5,087	4,643	4,755	5,118	5,601
Sales and marketing	3,331	3,392	3,357	3,776	2,488	2,440	2,336	2,886
Research and development	6,211	6,023	6,234	5,851	6,170	5,952	6,143	5,875
General and administrative	3,449	3,457	3,952	3,724	3,267	3,126	3,456	3,917
Total operating expenses	17,795	17,504	18,447	18,438	16,568	16,273	17,053	18,279
(Loss) income from operations	(1,010)	(392)	711	1,087	(1,800)	(818)	(89)	(19)
Other (expense) income, net:								
Foreign exchange gain (loss)	215	(22)	(99)	72	(52)	(171)	51	(150)
Interest expense, net	(37)	(28)	(18)	(13)	(62)	(52)	(57)	(53)
Other income, net	9	3	(3)	4	—	—	6	1
Total other income (expense), net	187	(47)	(120)	63	(114)	(223)	—	(202)
(Loss) income before income taxes	(823)	(439)	591	1,150	(1,914)	(1,041)	(89)	(221)
(Provision) benefit for income taxes	(120)	(239)	(436)	(816)	26	(154)	(344)	(1,070)
Net (loss) income	\$ (943)	\$ (678)	\$ 155	\$ 334	\$ (1,888)	\$ (1,195)	\$ (433)	\$ (1,291)
Basic (loss) income per share	\$ (0.06)	\$ (0.05)	\$ 0.01	\$ 0.02	\$ (0.13)	\$ (0.08)	\$ (0.03)	\$ (0.09)
Diluted (loss) income per share	\$ (0.06)	\$ (0.05)	\$ 0.01	\$ 0.02	\$ (0.13)	\$ (0.08)	\$ (0.03)	\$ (0.09)

Schedule II
Valuation and Qualifying Accounts
For the years ended January 31, 2017, 2016 and 2015

	Balance at Beginning of Period	Amounts Charged to Expense	Deductions From Allowance (1)	Balance at End of Period
(in thousands)				
Allowance for doubtful accounts				
Year Ended January 31, 2017	\$ —	\$ —	\$ —	\$ —
Year Ended January 31, 2016	\$ —	\$ —	\$ —	\$ —
Year Ended January 31, 2015	\$ —	\$ —	\$ —	\$ —
Valuation allowance for deferred tax assets				
Year Ended January 31, 2017	\$ 19,962	\$ 1,967	\$ —	\$ 21,929
Year Ended January 31, 2016	\$ 17,041	\$ 2,921	\$ —	\$ 19,962
Year Ended January 31, 2015	\$ 305	\$ 17,041	\$ (305)	\$ 17,041

(1) Deductions consist of amounts written off during the period.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), is recorded, processed, summarized and reported within the time periods specified in the rules and forms, and that such information is accumulated and communicated to us, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, we recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and we necessarily were required to apply our judgment in evaluating whether the benefits of the controls and procedures that we adopt outweigh their costs.

As required by Rule 13a-15(b) under the Exchange Act, an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of January 31, 2017 was conducted under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of January 31, 2017.

Management’s Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on our 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 controls 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 January 31, 2017. In making this assessment, management used the updated criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in *Internal Control—Integrated Framework (2013)*. Based on this assessment, our management concluded that as of January 31, 2017, our internal control over financial reporting is effective based on those criteria.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended January 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item will be set forth under the captions “Election of Directors,” “Executive Officers,” “Code of Ethics,” “Directors—Audit Committee Financial Expert” and “Corporate Governance” in our definitive proxy statement for the fiscal year 2017 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year (the “2017 Proxy Statement”), and is incorporated herein by reference.

We are also required under Item 405 of Regulation S-K to provide information concerning delinquent filers of reports under Section 16 of the Securities and Exchange Act of 1934, as amended. This information will be set forth under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” in our 2017 Proxy Statement, and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be set forth under the captions “Executive Officers—Executive Compensation” in our 2017 Proxy Statement and is incorporated herein by reference.

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

The information required by Item 403 of Regulation S-K will be set forth under the caption “Security Ownership of Certain Beneficial Owners and Management” in our 2017 Proxy Statement, and is incorporated herein by reference.

We have two equity compensation plans under which awards are currently authorized for issuance, our 2011 Stock Incentive Plan, or our 2011 Plan, and our 2011 Employee Stock Purchase Plan, or our 2011 ESPP. In connection with the consummation of our initial public offering in July 2012, our board of directors terminated any new offerings under our 1999 Series G Convertible Preferred Nonqualified Stock Option Plan, or our 1999 Plan, our 2005 Series G Convertible Preferred Stock Incentive Plan, or our 2005 Plan, and our 2007 Stock Incentive Plan, or our 2007 Plan. Each of our 2011 Plan, 2011 ESPP, 2007 Plan and 2005 Plan was approved by our stockholders prior to our initial public offering in 2012. Our 1999 Plan was not approved by our stockholders. The following table provides information regarding securities authorized for issuance as of January 31, 2017 under our equity compensation plans.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights, and vesting of outstanding restricted stock units	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
	(a)	(b)	(c)
Equity compensation plans approved by securityholders	2,194,543	\$ 8.87	560,639(1)(2)
Equity compensation plans not approved by securityholders	75,000 (3)	\$ 14.54	—
Total	2,267,043	\$ 9.06	560,639

- (1) Includes 99,101 shares issuable under our 2011 Stock Incentive Plan, which may be issued in the form of options, restricted stock, unrestricted stock, performance share awards or other equity-based awards.
- (2) Includes 461,538 shares issuable under our 2011 Employee Stock Purchase Plan.
- (3) Consists of an inducement award in August 2016 to one of the Company’s officers of an option to purchase 75,000 shares of the Company’s common stock pursuant to Rule 5635(c)(4) of the Nasdaq Global Select Market.

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

The information required by this item will be set forth under the caption “Executive Officers—Certain Relationships and Related Transactions” and “Corporate Governance” in our 2017 Proxy Statement, and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item will be set forth under the caption “Independent Registered Public Accounting Firm” in our 2017 Proxy Statement, is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as a part of this Report:

(1) Financial Statements —See Index to Consolidated Financial Statements and Financial Statement Schedule at Item 8 on page 45 of this Annual Report on Form 10-K.

(2) Financial Statement Schedules —See Index to Consolidated Financial Statements and Financial Statement Schedule at Item 8 on page 45 of this Annual Report on Form 10-K. All other schedules are omitted because they are not applicable or not required.

(3) Index to Exhibits.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K, event date June 27, 2012, filed on July 3, 2012)
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.3 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 31, 2013)
3.2	Amended and Restated By-laws (incorporated by reference to Exhibit 3.2 to our Current Report on Form 8-K, event date June 27, 2012, filed on July 3, 2012)
4.1	Specimen certificate for common stock of Exa Corporation (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-1, File No. 333-176019)
4.2	Exa Corporation 1999 Series G Convertible Preferred Nonqualified Stock Option Plan (incorporated by reference to Exhibit 4.13 to our Registration Statement on Form S-1, File No. 333-176019)*
4.3	Exa Corporation 2005 Series G Convertible Preferred Stock Incentive Plan (incorporated by reference to Exhibit 4.15 to our Registration Statement on Form S-1, File No. 333-176019)*
4.4	Exa Corporation 2007 Stock Incentive Plan (incorporated by reference to Exhibit 4.18 to our Registration Statement on Form S-1, File No. 333-176019)*
4.5	Exa Corporation 2011 Stock Incentive Plan (incorporated by reference to Exhibit 4.21 to our Registration Statement on Form S-1, File No. 333-176019)*
4.6	Form of Incentive Stock Option Agreement for use under the Exa Corporation 2011 Stock Incentive Plan (incorporated by reference to Exhibit 4.22 to our Registration Statement on Form S-1, File No. 333-176019)*
4.7	Form of Nonqualified Stock Option Agreement for use under the Exa Corporation 2011 Stock Incentive Plan (incorporated by reference to Exhibit 4.23 to our Registration Statement on Form S-1, File No. 333-176019)*
4.8	Form of Restricted Stock Unit Agreement for use under the Exa Corporation Amended and Restated 2011 Stock Plan (incorporated by reference to Exhibit 99.2 of our Current Report on Form 8-K, event date March 15, 2017, filed with the SEC on March 21, 2017)*
4.9	Exa Corporation 2011 Employee Stock Purchase Plan (incorporated by reference to Exhibit 4.24 to our Registration Statement on Form S-1, File No. 333-176019)*
10.1†	OEM License Agreement dated October 26, 2006 between ThermoAnalytics, Inc. and Exa Corporation (incorporated by reference to Exhibit 10.5 to our Registration Statement on Form S-1, File No. 333-176019)
10.2†	First Amendment to OEM License Agreement dated as of June 10, 2011 by and between ThermoAnalytics, Inc. and Exa Corporation (incorporated by reference to Exhibit 10.6 to our Registration Statement on Form S-1, File No. 333-176019)
10.3†	Second Amendment to OEM License Agreement dated as of February 1, 2013, by and between ThermoAnalytics, Inc. and Exa Corporation (incorporated by reference to Exhibit 10.15 to our Annual Report on Form 10-K for our fiscal year ended January 31, 2013)
10.4†	Third Amendment to OEM License Agreement dated as of December 1, 2015, by and between ThermoAnalytics, Inc. and Exa Corporation (incorporated by reference to Exhibit 10.4 to our Annual Report on Form 10-K for our fiscal year ended January 31, 2016).

Exhibit Number	Description
10.5	Lease dated July 21, 2008 between Netview 5 and 6 LLC and Exa Corporation (incorporated by reference to Exhibit 10.16 to our Registration Statement on Form S-1, File No. 333-176019)
10.6	First Amendment and Partial Termination Agreement dated July 31, 2015 between Exa Corporation and Network Drive Owner LLC (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the three months ended July 31, 2015)
10.7	Employment Contract dated October 17, 2001 between Exa Corporation and Jean-Paul Roux (incorporated by reference to Exhibit 10.18 to our Registration Statement on Form S-1, File No. 333-176019)*
10.8	Work Agreement dated January 10, 2006 between Exa Corporation and Jean-Paul Roux (incorporated by reference to Exhibit 10.8 to our Annual Report on Form 10-K for our fiscal year ended January 31, 2015)*
10.9	Employment Agreement dated April 22, 2015 between Exa Corporation and Stephen Remondi (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for our the three months ended April 20, 2015)*
10.10	Employment Agreement dated April 22, 2015 between Exa Corporation and Richard Gilbody (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the three months ended April 20, 2015)*
10.11	Employment Agreement dated August 1, 2016 between Exa Corporation and Joel Dube (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the three months ended October 31, 2016)*
10.12	Employment Agreement dated August 8, 2016 between Exa Corporation and Suresh Sundaram (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the three months ended October 31, 2016)*
99.1	Exa Corporation Policy Governing the Recovery of Certain Compensation (incorporated by reference to Exhibit 99.1 to our Current Report on Form 8-K, event date March 15, 2017, filed with the SEC on March 21, 2017)*
21.1	List of Subsidiaries
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm
31.1	Rule 13a-14(a)/15d-14(a) Certification, executed by Stephen A. Remondi, President, Chief Executive Officer and Director of Exa Corporation
31.2	Rule 13a-14(a)/15d-14(a) Certification, executed by Richard F. Gilbody, Chief Financial Officer of Exa Corporation
32.1	Section 1350 Certification, executed by Stephen A. Remondi, President, Chief Executive Officer and Director of Exa Corporation
32.2	Section 1350 Certification, executed by Richard F. Gilbody, Chief Financial Officer of Exa Corporation
101	Interactive Data Files pursuant to Rule 405 of Regulation S-T (XBRL)

* Indicates management contract or compensatory plan or arrangement.

† We have omitted portions of this exhibit which have been granted confidential treatment.

ITEM 16. Form 10-K Summary

Not applicable.

SIGNAT URES

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

EXA CORPORATION

By: /s/ Stephen A. Remondi
Stephen A. Remondi
Chief Executive Officer, President and Director
(Principal Executive Officer)
Date: March 22, 2017

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Stephen A. Remondi</u> Stephen A. Remondi	Chief Executive Officer, President and Director (Principal Executive Officer)	March 22, 2017
<u>/s/ Richard F. Gilbody</u> Richard F. Gilbody	Chief Financial Officer (Principal Financial Officer)	March 22, 2017
<u>/s/ Joel F. Dube</u> Joel F. Dube	Vice President of Finance (Principal Accounting Officer)	March 22, 2017
<u>/s/ John J. Shields, III</u> John J. Shields, III	Director	March 22, 2017
<u>/s/ John William Poduska</u> John William Poduska	Director	March 22, 2017
<u>/s/ Robert Burke</u> Robert Burke	Director	March 22, 2017
<u>/s/ Mark Fusco</u> Mark Fusco	Director	March 22, 2017
<u>/s/ Wayne Mackie</u> Wayne Mackie	Director	March 22, 2017
<u>/s/ Robert Schechter</u> Robert Schechter	Director	March 22, 2017

SUBSIDIARIES OF EXA CORPORATION

NAME OF ORGANIZATION	JURISDICTION
Exa GmbH	Germany
EUROXA S.a.r.l.	France
Exa Italy S.r.l.	Italy
Exa Japan Inc.	Japan
Exa UK Limited	United Kingdom
Exa Korea, Inc.	Korea
Exa (Shanghai) Simulation Software Technology, Co., Ltd.	China
Exa International, Inc.	Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-192746 and 333-198403) of Exa Corporation of our report dated March 22, 2017 relating to the financial statements and financial statement schedule, which appears in this Annual Report on Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

March 22, 2017

CERTIFICATION

I, Stephen A. Remondi, certify that:

1. I have reviewed this Annual Report on Form 10-K of Exa Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and to the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Stephen A. Remondi
Stephen A. Remondi
President, Chief Executive
Officer and Director
(Principal Executive Officer)

Date: March 22, 2017

CERTIFICATION

I, Richard F. Gilbody, certify that:

1. I have reviewed this Annual Report on Form 10-K of Exa Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and to the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Richard F. Gilbody
Richard F. Gilbody
Chief Financial Officer
(Principal Financial Officer)

Date: March 22, 2017

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

This certificate is being delivered pursuant to the requirements of Section 1350 of Chapter 63 (Mail Fraud) of Title 18 (Crimes and Criminal Procedures) of the United States Code and shall not be relied on by any person for any other purpose.

In connection with the Annual Report on Form 10-K of Exa Corporation (the "Company") for the period ended January 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Stephen A. Remondi, President, Chief Executive Officer and Director of the Company, certifies that:

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

Date: March 22, 2017

/s/ Stephen A. Remondi

Stephen A. Remondi

President, Chief Executive Officer and Director

(Principal Executive Officer)

The foregoing certification is being furnished with the Company's Annual Report on Form 10-K for the period ended January 31, 2017, pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general information language in such filing.

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

This certificate is being delivered pursuant to the requirements of Section 1350 of Chapter 63 (Mail Fraud) of Title 18 (Crimes and Criminal Procedures) of the United States Code and shall not be relied on by any person for any other purpose.

In connection with the Annual Report on Form 10-K of Exa Corporation (the "Company") for the period ended January 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Richard F. Gilbody, Chief Financial Officer of the Company, certifies that:

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

Date: March 22, 2017

/s/ Richard F. Gilbody

Richard F. Gilbody
Chief Financial Officer
(Principal Financial Officer)

The foregoing certification is being furnished with the Company's Annual Report on Form 10-K for the period ended January 31, 2017, pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general information language in such filing.