Amber Road, Inc.

Form 10-K

March 05, 2019

Amber Road, Inc.000131422310-KDecember 31, 2018FALSE2018FYAccelerated

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

to

Washington, D.C. 20549

Form

10-K

 $\+pannual$ report pursuant to section 13 or 15(d) of the securities exchange act of 1934 For the fiscal year ended December 31, 2018. OR

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

For the Transition Period from Commission file number 001-36360

AMBER ROAD, INC.

(Exact name of registrant as specified in its charter)

Delaware 22-2590301

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification Number)

One

Meadowlands

Plaza, East 07073

Rutherford, New Jersey (Address of

principal (Zip Code)

executive offices)

Registrant's telephone number, including area

code: (201) 935-8588

Securities registered pursuant to

Section 12(b) of the Securities Exchange Act:

Title of each
class

Common Stock,
\$0.001 par value

Name of
exchange on
which registered
New York Stock
Exchange

Securities registered pursuant to Section 12(g) of the Securities Exchange 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 by 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 by 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 by 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 b No "

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company," in Rule 12b-2 of the Exchange Act.

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. b

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

The aggregate market value of common stock held by non-affiliates of the registrant as of June 30, 2018 based upon the closing sales price for the registrant's common stock as reported on the New York Stock Exchange on that date, was approximately \$191,510,193. Shares of common stock held by each executive officer, director and certain 5% stockholders have been excluded, as such persons may be deemed affiliates. As of March 1, 2019, there were 28,083,011 shares of the registrant's common stock, par value \$0.001, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Parts of the registrant's Proxy Statement for the Registrant's 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

AMBER ROAD, INC. ANNUAL REPORT ON FORM 10-K

For the Year Ended December 31, 2018

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Amber Road, the Amber Road logo, Global Knowledge, Enterprise Technology Framework and other trademarks of Amber Road appearing in this report on Form 10-K are the property of Amber Road. All other trademarks, service marks and trade names in this report on Form 10-K are the property of their respective owners. We have omitted the ® and TM designations, as applicable, for the trademarks used in this report on Form 10-K.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements are often identified by the use of words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "project," "will," "would" or the negative or plural of these similar expressions or variations. Such forward-looking statements are subject to a number of risks, uncertainties, assumptions and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein, including those discussed in the section titled "Risk Factors", set forth in Part I, Item 1A of this Annual Report on Form 10-K and in our other SEC filings. You should not rely upon forward-looking statements as predictions of future events. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements. As used in this report, the terms "Amber Road", "we", "us", and "our" mean Amber Road, Inc. and its subsidiaries unless the context indicates otherwise.

PART I

Item I. Business

Company Overview

As a leading provider of cloud-based global trade management (GTM) solutions, our mission is to improve the way companies manage their international supply chains and conduct global trade. We deliver our GTM solutions using a Software-as-a-Service (SaaS) model and leverage a highly flexible technology framework to quickly and efficiently meet our customers' unique requirements around the world. Our solutions automate the global supply chain across sourcing, logistics, cross-border trade, and regulatory compliance activities to dramatically improve operating efficiencies and financial performance. This includes:

- •collaborating with suppliers on development, sourcing and quality assurance
- •executing import and export compliance checks and generating international shipping documentation
- •booking international carriers and tracking goods as they move around the world
- •minimizing the associated duties through use of preferential trade agreements and foreign trade zones Our GTM solutions combine enterprise-class software, trade content sourced from government agencies and transportation providers in more than 160 countries, and a global supply chain network connecting our customers with their trading partners, including suppliers, freight forwarders, customs brokers and transportation carriers. By automating more GTM processes, we enable our customers to enjoy significantly lower supply chain costs compared to manual processes and legacy systems.

We address the growing complexity of the global trade landscape by automating GTM functions to minimize import and export costs, optimize transportation, track shipments within a supply chain, and automate compliance with regulations and free trade agreements. Without this cloud-based automation, it would be difficult to effectively enable collaboration among the large number of trading partners involved in a global supply chain.

Our GTM solutions integrate Global Knowledge, a vast library of regulations and other content that we transform into a proprietary knowledgebase that enables our customers to automate GTM functions. Global Knowledge includes import and export regulations, shipping documents, preferential duties and taxes, specifications for free trade agreements, transportation rates, sailing schedules, embargoed country and restricted party lists, and harmonized tariff codes that identify goods based on standardized classifications, all sourced directly from government agencies and transportation carriers.

Our GTM solutions drive value to our customers through faster and more predictable delivery times, decreased labor, reduced in-transit inventories, and reduced international trading costs such as brokerage fees, logistics fees, transportation costs and customs duties. We sell our GTM solutions to many of the largest enterprises in the world, representing diversified industry verticals including Chemical/Pharmaceutical, High Technology/Electronics, Industrial/Manufacturing, Logistics, Oil & Gas, and Retail/Apparel.

Customers pay us subscription fees and implementation service fees for the use of our solutions under agreements that typically have an initial term of three to five years, with an average initial term of approximately 3.8 years for enterprise customers (customers with annual revenues that we believe are greater than \$1 billion) and 3.5 years for mid-market customers (customers with annual revenues that we believe are less than \$1 billion). Our revenue for the years ended December 31, 2018, 2017, and 2016 was \$85.2 million, \$79.1 million and \$73.2 million, respectively. We also had net losses of \$13.6 million, \$13.0 million, and \$18.7 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Industry Overview

The Origin and Rapid Growth of Global Trade Automation

Most global trade functions historically have been handled manually by outsourced service providers and internal specialists. Early global trade automation software focused narrowly on discrete problems such as restricted party screening and shipment tracking. These software programs were not integrated with each other or existing enterprise software and were weak in functionality. At the same time, demand for global trade automation has increased rapidly over the past few years, fueled by a combination of macro and micro economic trends. We believe these trends will continue to support the rapid increase of global trade and demand for GTM solutions.

Macroeconomic Drivers of Growth. We believe five macroeconomic trends are expanding the GTM automation marketplace:

•Growth in Imports from Low Cost Country Sourcing—Companies of all sizes and nearly every industry are pursuing low cost country sourcing strategies with suppliers in locations such as China, India and Southeast Asia.

- •Rising Demand in Global and Emerging Markets—Global trade volumes are being driven by higher exports as producers seek new markets to accelerate their growth. As the wealth of emerging market nations continues to rise, these countries have become significant sales opportunities for U.S. and European companies.
- •Increasing Border Security and Surveillance—Since 9/11, governments have imposed additional border security regulations that affect global trade. These additional security and automation requirements are driving additional demand for GTM automation.
- •Increasing Government Regulation—Government regulatory agencies have also promulgated additional regulations aimed at protecting consumers, spurring local economic growth, and boosting revenues from duties and taxes. Customs agencies around the world supervise cross-border trade by enforcing these regulations. All of these requirements increase the need for GTM automation.
- •Proliferating Free Trade Agreements—Governments are entering into multilateral free trade agreements to promote trade. For example, under the North American Free Trade Agreement (NAFTA) among the United States, Mexico and Canada, companies are able to import goods from partner countries with dramatically lower import duties. Complying with these requirements without automation can be difficult and expensive, and the challenge is not limited to NAFTA. There are more than 500 free and preferential trade agreements around the globe, each presenting myriad rules that governments modify continuously. Other examples of significant free trade agreements include the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), ASEAN-China Free Trade Area (ACFTA) and the Dominican Republic-Central America FTA (CAFTA-DR).

Microeconomic Drivers of Growth. To compete effectively, organizations must increase inventory turns, reduce cash-to-cash cycles, improve customer service, and reduce product cost after accounting for expenses such as transportation, brokerage fees, logistics fees, and customs duties, which we refer to as landed cost. Many firms that attempt to exploit low cost country sourcing fail to capture any benefits from their efforts. We believe this is due in part to a lack of both automation and skilled GTM practitioners. Due to long delivery times associated with shifting supply bases overseas, importers experience ballooning inventory levels, leading to higher costs. These problems increase the urgency of making the complex international supply chain work through GTM automation.

The Complexity of Global Trade Automation

As compared to domestic distribution management, global trade management introduces the complexities of multiple languages, time zones, currencies, and modes of transport. Further, there can be more than a dozen parties involved in a single international shipment. The laws governing global trade are numerous, highly complex and ever-changing. Organizations must review and act on a heavy volume of regulatory information, which is often published on paper in varying formats. These challenges are difficult to master without a solution that integrates up-to-date regulatory content with rules-based transactional software connected to each supply chain party.

The complexity of global trade is compounded by each global trade participant's unique position in the field. No two participants have identical needs, and automating global trade requires managing numerous combinations of functional requirements across a trading partner network, with each partner potentially using varied enterprise software. Successful GTM solutions must be flexible and adapt to changing regulations and business requirements without an ongoing need for significant professional services.

Shortcomings of Traditional Approaches to GTM

Even in some of the world's largest organizations, traditional manual approaches to global trade are still prevalent. Legacy approaches often use a combination of paper, facsimile and telephone based processes, spreadsheets, and other ineffective home-grown solutions that often create silos of unmanageable data. Where better automation exists, it is often based on applications developed using a legacy software architecture that is difficult to maintain and upgrade, and that delivers poor performance limited by a one-size-fits-all design. These applications may provide only basic transactional functionality while lacking the ability to perform deep trend analyses that provide important business insights and help management drive operational improvements.

Many legacy applications were deployed gradually, sourced from a variety of vendors in response to separately identified operating inefficiencies and rolled out as annual budget cycles permitted. They require significant ongoing professional services to maintain, and the difficulty of upgrading and maintaining them leads to an inherent lack of reliability in the face of constantly changing government regulations and input formats from supply chain partners. This software may also keep end users and support staff beholden to a patchwork of supporting legacy software that

exists as part of an ecosystem that further frustrates modernization.

The SaaS Approach to GTM

Capturing the full value of information and attaining the network effects possible in our global economy requires modern software that can exchange information with varied systems in a flexible manner while presenting timely and actionable information to end users. A SaaS model allows organizations to replace patchworks of legacy products and/or manual processes with a comprehensive solutions suite that automates trade from the time a purchase order is placed with an overseas supplier to the time a shipment is delivered. The SaaS alternative permits customers to outsource their GTM automation needs.

Our Growth Strategy

We intend to capitalize on investments made to expand our role as a provider of a market-leading GTM solutions by bringing our existing solutions to both new customers and new markets, while also expanding our relationship with existing customers. We will also expand our solutions to offer the most comprehensive and innovative features in the GTM marketplace. Key elements of our growth strategy include our plans for:

Invest in Sales. We will focus our sales effort on acquiring new customers, while also extending our relationship with existing customers via our account management initiative.

Invest in Marketing. We plan to maintain our marketing focus on lead generation, in particular using focused marketing programs to jump-start new territories. We also expect to devote additional resources to solidify our brand as a leading GTM solutions provider.

International Expansion. Currently, we sell our solutions predominantly in the United States, regions of Europe and China, where we target our marketing efforts and maintain dedicated inside and outside sales persons. Because our solutions have a global appeal, we believe that there are significant opportunities in the rest of the world. Although our customers are headquartered primarily in the United States, Europe and Asia, we have deployed our solution to their users in more than 80 countries, giving us a foothold in many countries where we currently have no sales offices. We intend to invest in new sales and support operations, and may establish new offices in these regions, which will build on our pre-existing user base.

Expand Our Solutions. We have a history of bringing innovative solutions to market as demonstrated by our robust Global Knowledge library and flexible, proprietary Enterprise Technology Framework. We will continue to leverage our solutions team to expand the depth and breadth of our solutions in response to customer requests and the evolving nature of global trade. For example, we may expand our solutions to automate working with free trade zones, which are areas where goods may be imported, transformed, and then exported without the need to pay customs duties. We also intend to maintain our market leadership in trade content.

Execute Strategic Acquisitions. Strategic acquisitions represent an opportunity for us to augment our solutions capabilities and sales team. The GTM solutions market is fragmented, and we believe some participants may have best-of-breed solutions to specific problems, particularly those created by the unique trading requirements of foreign countries. We may acquire those participants to expand our solutions. Further, developing an effective sales force in foreign markets requires a nuanced understanding of local business customs. We may, for example, choose to acquire local GTM software companies in order to obtain sales teams with a track record of success in their markets. We currently have no agreements or understandings to acquire any such companies.

Our Solutions Modules and Services

We implement our solutions as modules, selling them individually or as a suite, depending on our customers' needs. Materially all of our modules rely on our trade content, and our professional services team configures them to address the following mission-critical GTM business challenges:

Import Management. Our import management module assists customers with landed cost calculations to determine the lowest-cost country from which to source goods, and streamlines legal compliance, reporting of product classifications, admissibility review, customs entry management and security filings. Key import management capabilities are global master record modeling, country sourcing, restricted party screening, cost calculation, document management, and reporting. Some benefits related to import management include reduced brokerage fees, reduced import delays, improved import cycle times, improved classification efficiency, reduced or eliminated post entry reviews and improved import audit.

Export Management. Our export management module allows exporters to adopt best practices on a global level, gain a centralized view of export compliance and automate key export processes. Key export management capabilities

are partner and product modeling, product classification, restricted party screening, export compliance, license tracking, document management, and reporting. Some benefits related to export management include reduced freight forwarder fees, improved classification efficiency, improved restricted party screening efficiency, improved licensing efficiency, improved shipment processing, improved export audit processes and avoidance of fines and penalties, including loss of export privileges.

China Trade Management. Our China Trade Management (CTM) solution enables companies to automate import and export processes for China operations. This allows companies to meet China compliance requirements for General and Processing Trade, reduce costs and improve supply chain efficiencies. The CTM module automates the process for companies that import components and materials into China for manufacturing and then export finished goods, without paying import duties and value-added taxes. Key CTM capabilities are processing trade, general trade, and free trade zone. Some benefits related to CTM management include eliminating the manual effort to manage China workbooks and customs reporting, eliminating payment of import duties and value-added taxes under the Processing Trade regime, implementing better reporting with Chinese customs authorities, and responding quickly to Chinese regulatory changes.

Global Logistics Management. Our global logistics management module enhances both global trade management and supply chain visibility. Global trade management solutions optimize the movement of goods by helping to manage transportation contracts, evaluate alternative routes, select carriers and oversee logistics operations. Supply chain visibility solutions connect importers and exporters with their overseas suppliers, logistics providers, brokers and carriers to enable them to track and monitor goods in near real time as they move through the global supply chain. Key global logistics management capabilities are contract and rate management, carrier selection and booking, freight audit, purchase order management, alerts and notifications, trading partner network, data quality management, and reporting. Some benefits related to global logistics management include improved transportation procurement, improved carrier selection, improved booking efficiency, reduced transportation costs, reduced in-transit and on-hand inventory, reduced order cycle times, and improved customer service.

Trade Agreement Management. Our trade agreement management module automates free trade agreement administration. Key trade agreement management capabilities are rules of origin management, trade agreement content packs, bills of material modeling, bills of material qualification, certificate management, certificate requests, and reporting. Some benefits related to trade agreement management include improved supplier solicitation efficiency, improved qualification and processing efficiency, improved customer service and price management for exports and reduced customs duties.

Supply Chain Collaboration. Our supply chain collaboration (SCC) solution provides global sourcing and collaborative supply chain solutions for brand-focused companies and offers a cloud-based SCC platform that optimizes product lifecycle and supply chain processes. Our SCC products help customers effectively manage their relationships with product suppliers, raw material vendors, product testing and social compliance audit firms, and global logistics companies and currently focuses on the following four primary business areas:

- *Vendor and Production Management* allows global brands to efficiently on-board new suppliers, monitor capacity, manage purchase orders and raw material orders, as well as monitor production status.
- •Material and Product Management helps brands, their suppliers and tier-two material suppliers to collaborate and deliver more innovative products, by efficiently managing the sampling and testing processes, planning, forecasting and reserving raw materials and sourcing finished good production.
- Risk and Quality Management helps to ensure that what is produced meets international regulatory testing requirements, brand specifications and social compliance standards with comprehensive functionality to manage component and product testing, auditing and finished goods quality inspections.
- •Shipment and Logistics Management provides a platform to document, manage and monitor all logistics activities from in-factory carton label creation, advanced shipping notice generation, carrier booking and tracking, and invoicing through receipt into the warehouse.

Professional Services. Our global professional services team encompasses subject matter experts, information technology professionals and project managers who implement our solutions. These consultants have years of experience implementing enterprise solutions, and expertise with a wide range of customers, industries and industry-standard applications and integration technologies. Our professional services cover four areas:

- •Assessment—We review customers' business processes on a project and an ongoing basis to discover opportunities for automation.
- *Implementation*—We deploy our solutions with a proven methodology focused on best practices and create thorough documentation to facilitate training, support and upgrades.

- Education and Training—We train users to ensure proper compliance and efficiency, including sessions for end users, solutions administrators and technical operators.
- *Maintenance and Support*—We provide production support 24 hours per day, 365 days per year for any critical issues, and regular solutions upgrades.

We provide our professional services pursuant to a professional service agreement and a related statement of work. In most cases, we bill professional services on a time and expense basis. The length of time and cost to implement our GTM

solutions depend on many factors, including the number of modules being implemented, the scope of the deployment, the complexity of our customer's environment and the availability of customer resources. For the years ended December 31, 2018, 2017, and 2016, revenue from professional services accounted for 26%, 26% and 27%, respectively, of our total revenue, with the remainder representing subscription revenue.

Customers

In 2018, 2017, and 2016, our solutions served 862, 807 and 752 customers, respectively. Of our 862 customers in 2018, 304 were multi-national enterprise customers with annual revenues that we believe are greater than \$1 billion, and 558 were mid-market customers, with annual revenues that we believe are less than \$1 billion. The average term of our current customers' initial agreement with us is approximately 3.8 and 3.5 years for our enterprise and mid-market customers, respectively. In 2018, our average revenue from enterprise customers was \$239,435 and our average revenue from mid-market customers was \$22,183. Our customers are headquartered primarily in the United States, Europe and China.

Our customers typically pay us an annual subscription fee at the start of each contract year. The subscription fee is fixed for the term of the agreement, and typically is based on expected transaction volumes, such as the number of annual shipments or import entries. To the extent that a customer exceeds contracted maximum transaction volumes, they incur per transaction fees. This pricing structure allows us to sell more affordable, entry-level configurations to customers with fewer needs, as well as sophisticated configurations to enterprise customers with greater needs. The subscription fees typically begin within the first few months following contract execution, whether or not we have completed the solution's implementation, and our subscription agreements may typically only be terminated for cause. Generally, we charge for professional services to implement our solutions on a time and materials basis.

For the years ended December 31, 2018, 2017, and 2016, our annualized recurring revenue retention was 101%, 103% and 101%, respectively. We calculate our annualized recurring revenue retention rate by comparing, for a given quarter, subscription revenue for all customers in the corresponding quarter of the prior year to the subscription revenue from those same customers in the given quarter and calculating the average of the four quarters for the stated year. For the years ended December 31, 2018, 2017, and 2016, revenue from international customers accounted for 25%, 24%, and 21% of total revenue, respectively.

Competition

The market for GTM automation solutions is competitive, rapidly evolving, and subject to shifts in technology and customer needs. While we do not believe that any specific competitor offers the breadth of capabilities that we do, we compete with three types of organizations:

Enterprise Resource Planning Vendors. We compete with the large, enterprise resource planning software companies such as Oracle Corporation and SAP AG. These companies are extremely well financed, have prominent brands, and have extensive coverage of the enterprise software market across business functions. In many cases, they have entrenched relationships with the IT departments of our current and prospective customers. We compete with these organizations by:

- •providing greater subject matter expertise throughout the sales cycle
- •demonstrating our superior solutions capabilities and breadth
- •providing a lower total cost of ownership by delivering complete solutions, including trade content and a global trading partner network, as compared to acquiring these capabilities from separate vendors
- •aligning our interests with those of our customers by charging them a recurring subscription fee for recurring value, rather than a large, up-front licensing fee
- •providing quick time to value by deploying under a SaaS model

GTM Vendors. We also compete with focused GTM vendors. These vendors provide one or more functions including import management, export management, trade content, supply chain visibility, or free trade agreement management. They generally do not have the solutions breadth that we provide, but may have superior capabilities in the functions they provide and they may have lower pricing than we do. We compete with these organizations by:

- •demonstrating our superior solutions breadth and selling our GTM suite
- •delivering a complete offering, that provides a lower total cost of ownership than acquiring all needed capabilities from separate vendors

Service Providers. To a much lesser extent, we compete with service firms including large freight forwarders. This occurs when companies outsource a particular GTM function such as license management or classification to service firms who generally perform these functions manually. In many cases, we work with these service providers rather than competing with them. For example, they may provide their services by working with our GTM solutions on behalf of mutual customers.

We compete with these organizations by demonstrating the superior return on investment attainable through higher levels of automation compared to the service providers' more manual approach.

Sales and Marketing

Our sales and marketing team consisted of 68 professionals as of December 31, 2018. The marketing team primarily focuses on lead generation for our sales force, and also dedicates an increasing amount of time to fostering recognition of the Amber Road GTM brand. Our marketing activities consist of email campaigns, search engine optimization and marketing, webinars, seminars and sponsored campaigns with trade journals. We focus heavily on marketing analytics enabled by automated tools that allow us to track prospects and funnel them from initial contact to qualified lead and finally to our sales force.

We sell our solutions through a direct sales force. We have outside sales teams comprised of sales directors and technical specialists who sell to enterprise customers, and established an account management group to focus on our base of existing customers. We also employ inside sales persons and technical specialists who target mid-market companies.

Research and Development

Our success to date, and our growth strategy for the future, rely on advancing the state of the art of GTM automation. As of December 31, 2018, our research and development team consisted of 252 employees dedicated to the development of our GTM solutions. The majority of our engineers reside in Bangalore, India and many of them have domain expertise in the GTM field. Accordingly, we will continue to devote resources to help us to remain a leader in global trade management. For the years ended December 31, 2018, 2017, and 2016, our total research and development expenses were \$14.7 million, \$14.9 million and \$16.8 million, respectively.

Technology

Our solutions are based on our Enterprise Technology Framework, a proprietary technology developed by our employees. Our Enterprise Technology Framework includes application programming interfaces, web-based development tools, run-time engines that execute meta-data components, and a comprehensive set of administrative features that combine to provide a unified technology architecture and user experience.

Our Enterprise Technology Framework is capable of delivering our solutions over the Internet using a SaaS model, and can be configured as a multi-tenant environment that permits different customers to share a common operating environment while protecting them from unauthorized access to each other's applications and data. For customers who require physical segregation of their applications and data from those of other customers, our Enterprise Technology Framework is also capable of delivering our solutions in a separate instance configuration through dedicated servers in our data center or on the customer's premises. Because we primarily deliver our solutions over the Internet using a SaaS model, we, like other SaaS providers, are subject to cyber-attack. As such, we have invested, and continue to invest, in critical information security infrastructure and resources.

Regardless of the deployment method, our customers retain the ability to uniquely configure our solutions and determine how data is shared or segregated among their operating groups, with the potential to provide each operating group a customized view of our solutions optimized for the business processes they execute.

The most important capability of our Enterprise Technology Framework to our customers, and the most difficult technical problem that it solves, is permitting our professional services organization to configure our solutions during implementation in a manner that separates customer-specific configurations from our core application, allowing our customers to upgrade to new versions of our solutions while retaining their unique business settings and avoiding the need to re-implement these configurations.

Data Center Operations

We host our GTM, SCC and CTM solutions for our cloud delivery model customers in appropriately located and highly secure co-location facilities. These facilities are protected by state-of-the art physical security features, heating and cooling systems, redundant, uninterruptible power systems and backup generators. Each is staffed and designed to be operational 24 hours per day, 365 days per year. Our equipment is located in a portion of the data center that is dedicated to our use and securely separated from other tenants of the data center.

We own or lease all of the equipment that provides our solutions, and our employees manage all of the hardware, software, databases, data backup, security and local network hardware necessary to provide our solutions. Our network infrastructure features redundant load balanced Internet connections provided by diverse internet service

providers. We perform data backups in accordance with industry custom, including real time database backups. We maintain backup co

-location facilities to provide continuity of services in case of a catastrophe affecting our primary co-location facility. We conduct disaster recovery tests annually and are capable of bringing our solutions online following catastrophe scenarios.

Multiple layers of security protect our solutions from malicious external activity (cyber-attacks). We monitor the integrity and availability of our solutions in real time and hire third party consultants to audit the security of our information technology systems quarterly, and conduct application and network vulnerability testing annually. We utilize licensed and certified third parties to review our operating controls and information systems. We maintain certifications through independent SOC 2 audit reviews for the "Security", "Confidentiality", "Data Privacy", "Processing Integrity" and "Availability" principles and receive attestations of compliance with these standards.

Also, we outsource some of our cloud infrastructure to Amazon Web Services (AWS), which hosts certain modules of our solutions. Customers need to be able to access our solutions at any time, without interruption or degradation of performance. AWS runs its own platform that we access, and we are, therefore, vulnerable to service interruptions at AWS. To the extent that we do not effectively address capacity constraints, either through AWS or alternative providers of cloud infrastructure, our business, results of operations and financial condition may be adversely affected. In addition, any changes in service levels from AWS may adversely affect our ability to meet our customers' requirements.

Intellectual Property

We rely upon a combination of trade secrets, copyright and trademark law, as well as contractual restrictions such as confidentiality agreements, to establish and protect our proprietary rights. We have a number of registered and unregistered trademarks and no pending patent applications or issued patents. We maintain a policy requiring our employees, consultants and other third parties to enter into confidentiality and proprietary rights agreements before developing or accessing our software, documentation and other proprietary information, as applicable. We believe that our experience in the market, our significant research and development investments, and our flexible Enterprise Technology Framework will help us to maintain our leadership position in GTM automation.

Despite our efforts to protect our proprietary rights, unauthorized parties may misappropriate our technology to develop a competing solutions. Policing unauthorized use of our technology is difficult and the laws of other countries in which we sell our solutions may offer little or no effective protection for our technology. Our competitors could also independently develop technologies equivalent to ours, and without patent protection for our intellectual property, we would not be able to restrict them from selling their solutions. Despite the potential competition for GTM technology, our Global Knowledge trade content library represents a significant barrier to any competitor seeking to offer a comprehensive GTM solutions.

Employees

As of December 31, 2018, we had 699 employees. None of our employees is represented by a labor union with respect to their employment with us. We have not experienced any work stoppages and we consider our relations with our employees to be good.

Corporate Information

We are incorporated in the state of Delaware and our corporate headquarters are located at One Meadowlands Plaza, East Rutherford, NJ 07073. Our telephone number is (201) 935-8588. We maintain a website at www.amberroad.com. Our website and information contained on or linked to our website are not a part of this Annual Report on Form 10-K.

Item 1A. Risk Factors

Our operating and financial results are subject to various risks and uncertainties including those described below, together with all of the other information in this Annual Report on Form 10-K, including the Consolidated Financial Statements and the related notes included elsewhere in this report, which you should consider before deciding whether to invest in shares of our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. If any of the following risks or others not specified below actually occurs, our business, financial condition, results of operations, and future prospects could be materially and adversely affected. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Solutions

If we are unable to attract new customers or our existing customers do not renew their subscriptions, the growth of our business and cash flows will be adversely affected.

To increase our revenue and cash flows, we must regularly add new customers. If we are unable to hire or retain effective sales personnel, or generate sufficient sales leads through our marketing programs, or if our existing or new customers do not

perceive our solutions to be of sufficiently high value and quality, we may not be able to increase sales and our operating results would be adversely affected. In addition, our existing customers have no obligation to renew their subscriptions, and renewal rates may decline or fluctuate due to a number of factors, including customers' satisfaction with our solutions, our professional services, our customer support, our prices and the prices of competing solutions, as well as mergers and acquisitions affecting our customer base, global economic conditions and customers' spending budgets. If we fail to sell our solutions and services to new customers or if our existing customers do not renew their subscriptions, our operating results will suffer, and our revenue growth, cash flows and profitability may be materially and adversely affected.

The market for cloud-based GTM solutions is still evolving. If this market develops more slowly than we expect, our revenue may decline or fail to grow and we may incur additional operating losses.

We derive, and expect to continue to derive, substantially all of our revenue from providing a cloud-based GTM solutions and related services. The market for cloud-based GTM solutions is still evolving and it is uncertain whether these solutions will sustain high levels of demand and market acceptance. Our success will depend on the willingness of companies to accept our cloud-based GTM solutions as an alternative to manual processes, traditional enterprise resource planning software and internally-developed GTM solutions. Some customers may be reluctant or unwilling to use our cloud-based GTM solutions for a number of reasons, including data privacy concerns, data and network security concerns and existing investments in GTM technology.

Traditional approaches to GTM automation have required, among other things, purchasing hardware and licensing software. Because these traditional approaches often require significant initial investments to purchase the necessary technology and to establish systems that comply with customers' unique requirements, companies may be unwilling to abandon their current solutions for our cloud-based GTM solutions. Other factors that may limit market acceptance of our solutions include:

- •our ability to maintain high levels of customer satisfaction
- •our ability to maintain continuity of service for all users of our solutions
- •the price, performance and availability of competing solutions
- •our ability to address companies' confidentiality concerns about information stored outside of their premises If companies do not perceive the benefits of our cloud-based GTM solutions, or if companies are unwilling to accept our solutions as an alternative to traditional approaches, the market for our solutions might not continue to develop or might develop more slowly than we expect, either of which could significantly adversely affect our revenues and growth prospects.

The information we source from third parties for inclusion in our Global Knowledge library may not be accurate and complete, our trade experts may make errors in interpreting legal and other requirements when processing this information, and our trade content may not be updated on a timely basis, which can expose our customers to fines and other substantial claims and penalties.

Our customers often use our solutions as a system of record and many of our customers are subject to regulation of their products, services and activities, Our Global Knowledge library includes trade content sourced from government agencies and transportation carriers in numerous countries. It is often sourced from text documents and includes import and export regulations, shipping documents, preferential duties and taxes, specifications for free trade agreements, transportation rates, sailing schedules, embargoed country and restricted party lists, and harmonized tariff codes. The information in these text documents may not be accurate and complete. Our team of trade experts transforms these documents into a normalized and propriety knowledgebase, interpretable by software, and in so doing has to interpret the legal and other requirements contained in the source documents. We can provide no assurances that our trade experts do not make errors in the interpretation of these requirements. Furthermore, rules and regulations and other trade content used in our solutions change constantly, and we must continuously update our Global Knowledge library. Maintaining a complete and accurate library is time-consuming and costly and we can provide no assurances that our specialists will always make appropriate updates to the library on a timely basis. Errors or defects in updating the trade content we provide to our customers and any defects or errors in, or failure of, our software, hardware, or systems, can result in an inability to process transactions or lead to violations that could expose our customers to fines and other substantial claims and penalties and involve criminal liability. In addition, these errors and delays may damage our reputation with both existing and new customers and result in lost customers and

decreased revenue, which could materially and adversely affect our business, revenue and results of operations. Any of these problems may enable our customers to terminate our agreements or we may be required to issue credits or refunds, and may be subject to product liability, breach of warranty or other contractual claims. We also may be required to indemnify our customers or third parties as a result of any of these problems. Any provisions in our customer agreements intended to limit liability may not be sufficient to protect us against any such claims. Insurance may not be available on acceptable terms, or at all. In addition, any insurance we do have may not cover claims related to specific defects, errors, failures or delays, may not cover indirect or consequential damages, and otherwise may be inadequate, and defending a suit,

regardless of its merit, could be costly and divert management's attention. In general, losses from customers terminating their agreements with us and our cost of defending claims resulting from defects, errors, failures or delays might be substantial, and could have a material adverse effect on our business, financial position, results of operations and cash flows.

Our sales cycle can be long and unpredictable and requires considerable time and expense, which may cause our operating results to fluctuate.

The sales cycle for our solutions, from initial contact with a potential lead to contract execution and implementation, varies widely by customer, and can be lengthy. Some of our customers undertake a significant evaluation process that frequently involves not only our solutions, but also solutions of our competitors, which may result in extended sales cycles. Our sales efforts involve educating our customers about the use, technical capabilities and benefits of our solutions. We have no assurance that the substantial time and money spent on our sales efforts will produce any sales. Furthermore, our sales and marketing efforts in a given period may only result in sales in subsequent periods, or not at all. If we do not realize sales from a customer in the time period expected or at all, our business, operating results and financial condition could be adversely affected.

The complexity of our sales and implementation cycles exposes us to operational risks that we must manage carefully.

The complexity of our sales and implementation cycles makes predicting the time to close a sale and implement our solutions difficult, thereby exposing us to operational risks. The length of these cycles depends on our customers' motivation and the resources they devote to the process. If our sales or implementation cycles are longer than we anticipate, we may face staffing shortages or cost overruns.

If our customers are not satisfied with our solutions implementation, we could incur additional costs to address these issues, reducing our professional services revenue and the opportunity to sell additional solutions modules to these customers. In addition, any negative publicity related to our customer relationships, regardless of its accuracy, may damage our business by affecting our ability to compete for new business with current and prospective customers.

We face intense competition, and our failure to compete successfully would make it difficult for us to add and retain customers and would impede the growth of our business.

The GTM solutions market is fragmented, competitive and rapidly evolving. We compete with GTM vendors, traditional enterprise resource planning vendors such SAP and Oracle, and other service providers, as well as with solutions developed internally by enterprises seeking to manage their global trade. Some of our actual and potential competitors may enjoy competitive advantages over us, such as greater name recognition, more varied offerings and larger marketing budgets, as well as greater financial, technical and other resources. Furthermore, some competitors may have best-of-breed solutions to problems created by the unique trading requirements of particular countries. As a result, our competitors may be able to respond more quickly than we can to new or changing opportunities, technologies, standards or customer requirements or devote greater resources to the promotion and sale of their products and services than we can.

The intensity of competition in the GTM market has resulted in pricing pressure as the market has developed and our competitors very frequently offer substantial price discounts for their products. We expect the intensity of competition to increase in the future as existing competitors develop their capabilities and as new companies, which could include one or more large software or trade content providers, enter our market. Increased competition could result in additional pricing pressure, reduced sales, shorter term lengths for customer contracts, lower margins or the failure of our solutions to achieve or maintain broad market acceptance. If we are unable to compete effectively, it will be difficult for us to maintain our pricing rates and add and retain customers, and our business, financial condition and results of operations will be harmed.

Industry consolidation may result in increased competition.

We believe that it is likely that some of our existing competitors will consolidate or will be acquired. Some of our competitors have made or may make acquisitions or may enter into partnerships or other strategic relationships to offer more comprehensive solutions than they individually had offered. We expect consolidation in the industry as companies attempt to strengthen or maintain their market positions. This could result in competitors with greater financial, technical, sales, marketing, service and other resources than us. The companies resulting from such combinations may eliminate gaps in their solutions, including a lack of integrated or comprehensive trade content, and

these combinations may create more intense competition. Any such consolidation, acquisition, alliance or cooperative relationship could lead to pricing pressure, erosion of our margins, and loss of market share, all of which could have a material adverse effect on our business, results of operations and financial condition.

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 current definitive agreements or commitments for any acquisitions, our business strategy may include acquiring complementary services, technologies or businesses to augment our solutions capabilities and sales platform, particularly in foreign markets. We also may enter into relationships with, or invest in, other businesses to expand our service offerings or our ability to provide service in foreign jurisdictions. 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, solutions, 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.

Our success depends in part on our ability to develop and market new and enhanced solutions modules, and we may not be able to do so, or do so quickly enough to respond to changes in demand. Even if we anticipate changes in demand, it may be difficult for us to transition existing customers to new versions of our solutions. Our success depends in part on our ability to develop and market new and enhanced solutions modules, and to do so

Our success depends in part on our ability to develop and market new and enhanced solutions modules, and to do so on a timely basis. Successful module development and marketing depends on numerous factors, including anticipating customer requirements, changes in technology requirements, our ability to differentiate our solutions from those of our competitors, and market acceptance of our solutions. Enterprises are requiring their software application vendors to provide ever increasing levels of functionality and broader offerings. Moreover, our industry is characterized by rapid evolution, and shifts in technology and customer needs. We may not be able to develop and market new or enhanced modules in a timely or cost-effective manner or at all. Our solutions also may not achieve market acceptance or correctly anticipate technological changes or the changing needs of our customers or potential customers. In addition, even if we correctly anticipate changes in technology or demand, it might be difficult for us to transition existing customers to new versions of our solutions. Such transitions or upgrades may require considerable professional services effort and expense and customers may choose to discontinue using our solutions rather than proceed with a lengthy and expensive upgrade. If customers fail to accept new versions of our solution, if our newest solutions contains errors, or if we expend too many resources supporting multiple versions of our solutions, we may suffer a material adverse effect on our business, financial position, results of operations and cash flows.

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, as well as those involved with maintaining our extensive Global Knowledge database, 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 disproportionately negative effect on our expected results of operations and profitability for that quarter.

Our solutions are complex and customers may experience difficulty in implementing, upgrading or otherwise achieving the benefits attributable to them.

Due to the scope and complexity of the solutions that we provide, our implementation cycle can be lengthy and unpredictable. Our solutions require configuration and must integrate with many existing computer systems and applications of our customers and their trading partners. This can be time-consuming and expensive for our customers

and can result in delays in the implementation of our solutions. As a result, some customers have had, and may in the future have, difficulty implementing our solutions successfully or otherwise achieving the expected benefits of our solutions. Delayed or ineffective implementation or upgrades of our solutions may limit our future sales opportunities, negatively affect revenue, result in customer dissatisfaction and harm our reputation.

Our software may contain material undetected errors, which could enable or otherwise cause our customers to terminate or not renew their subscriptions, damage our reputation and adversely affect our business, revenue and results of operations.

Our software is inherently complex and, despite extensive testing and quality control, may contain material undetected errors or failures especially when first introduced or as new versions are released. Failures or errors in our software could result in data loss or corruption. We may not find errors in new or enhanced solution modules before we release them and such errors may not be discovered by us or our customers until after we have implemented these modules. These errors in our modules could enable or otherwise cause our customers to terminate or not renew their subscriptions. In addition, they may damage our reputation with both existing and new customers and result in lost customers and decreased revenue, which could materially and adversely affect our business, revenue and results of operations.

Our business is subject to cyberattacks and security and privacy breaches and if unauthorized persons breach our security measures, or those of third parties that provide infrastructure for, or components of, our GTM solutions, they could access client data, leading clients to curtail or stop their use of our solutions, which could harm our business, financial condition and results of operations.

Our GTM solutions involves the storage and transmission of confidential information of customers, including certain financial data. We may also in the course of our service engagements have access to confidential customer and personal information. Any security breaches, unauthorized access, unauthorized usage, virus or similar breach or disruption could result in loss of confidential information, personal data and customer content, damage to our reputation, early termination of our contracts, litigation, regulatory investigations, increased costs or other liabilities. If our security measures, or those of our service providers, are breached as a result of third-party action, employee error, malfeasance or otherwise and, as a result, someone obtains unauthorized access to confidential information, personal data or customer content, our reputation will be damaged, our business may suffer and we could incur significant liability associated with higher insurance premiums, costs of indemnification and remediation, litigation, regulatory investigations and penalties that could damage our reputation and adversely impact our results of operations and financial condition. If the measures we have put in place to limit or restrict access to and use of functionality, usage entitlements and support for customers or prospective customers are breached, circumvented or ineffective as a result of third-party action, employee error, malfeasance or otherwise and, as a result, someone obtains unauthorized access to and use of functionality, usage entitlements and support, our business may suffer or we could incur significant liability and/or costs.

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 solutions occurs, the market perception of our solutions could be harmed and we could lose sales and customers. Any significant violations of data privacy or unauthorized disclosure of information could result in the loss of business, higher insurance premiums, costs of indemnification and remediation, litigation and regulatory investigations and penalties that could all damage our reputation and adversely impact our results of operations and financial condition. Moreover, if a security breach occurs with respect to another SaaS provider, our customers and potential customers may lose trust in the security of the SaaS business model generally, which could adversely impact our ability to retain existing customers or attract new ones.

Legal and regulatory changes related to data protection and privacy could create unexpected costs, require changes to our business, impact the use and adoption of our solutions or require us to agree to onerous terms and conditions, which could have an adverse effect on our future revenue, operating results or customer retention.

Legal and regulatory frameworks for data protection and privacy issues are evolving worldwide, and various government and consumer agencies and public advocacy groups have called for new regulation and changes in industry practices. We expect federal, state and foreign governments to expand data protection and privacy regulation and we expect more public scrutiny, enforcement and sanctions in this area. In addition, foreign court judgments and regulatory actions may affect our ability to transfer, process and receive data transnationally, including data that is critical to our operations or core to the functionality of our solutions. New laws, regulations, judgments or actions may

relate to the solicitation, collection, processing, use and disclosure of personal information, including cross-border transfers of personal information, in a way that could affect demand for our solutions or cause us to change our platform or business model and increase our costs of doing business.

Our customers can use our solutions to store personal information that is or may be considered personal data in some jurisdictions and, therefore, may be subject to this evolving legislation, regulation or heightened public scrutiny. In addition to the potential adoption of new laws and regulations in the United States and internationally, evolving definitions and norms regarding personal data may require us to adapt our business practices, or limit or inhibit our ability to operate or expand our business.

In order to comply with new United States or international laws, regulations or judgments, including adopting new and potentially onerous customer contractual clauses, we may incur substantial costs or change our business practices in a manner that could reduce our revenue or compromise our ability to effectively pursue our growth strategy. Furthermore, to comply with any new non-U.S. laws, regulations or judgments, we may have to create expensive duplicative information technology infrastructure and business operations, which could hinder our expansion plans or render them commercially infeasible, increase our costs of doing business and harm our financial results. In addition, customers may experience higher compliance costs as a result of laws, regulations and judgments, which may limit the use and adoption of our solutions and reduce overall demand, or lead to significant fines, penalties or liabilities for any noncompliance. As a result, some industries may not adopt our solutions based on perceived privacy concerns, regardless of the validity of such concerns.

The EU has recently adopted a comprehensive overhaul of its data protection regime from the current national legislative approach to a single European Economic Area Privacy Regulation, the General Data Protection Regulation ("GDPR"), which came into effect on May 25, 2018. The EU data protection regime extends the scope of the EU data protection law to all foreign companies processing data of EU residents. It provides for a harmonization of the data protection regulations throughout the EU, thereby making it easier for non-European companies to comply with these regulations. It imposes a strict data protection compliance regime with severe penalties of up to the greater of 4% of worldwide turnover and €20 million and includes new rights such as the "portability" of personal data. Although the GDPR will apply across the EU without a need for local implementing legislation, as has been the case under the current data protection regime, local data protection authorities ("DPAs") will still have the ability to interpret the GDPR, which has the potential to create inconsistencies on a country-by-country basis. Implementation of and compliance with the GDPR have required changes to certain of our business practices, thereby increasing costs. The implementation of GDPR has led other jurisdictions to either amend, or propose legislation to amend their existing data privacy and cybersecurity laws to resemble the requirements of GDPR. For example, on June 27, 2018, California adopted the California Consumer Privacy Act of 2018 ("CaCPA"). The CaCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions in the GDPR. Because of this, we may need to engage in additional compliance efforts, including data mapping to identify the personal information we are collecting and the purposes for which such information is collected and enhanced consumer controls with respect to their data. All of this will need to be done before the effective date of the CaCPA on January 2, 2020. If we are unable to meet these new standards, our business could be harmed. We post on our website our privacy policies and practices regarding the collection, use and disclosure of user data. Any failure, or perceived failure, by us to comply with our posted privacy policies or with any applicable regulatory requirements or orders, or privacy, data protection, information security or consumer protection-related privacy laws and regulations in one or more jurisdictions could result in proceedings or actions against us by governmental entities or others, including class action privacy litigation in certain jurisdictions, subject us to significant fines, penalties, judgments and negative publicity, require us to change our business practices, increase the costs and complexity of compliance, and adversely affect our business. There is no assurance that contractual indemnity or insurance would be available to offset any portion of these costs. Data protection, privacy and information security have become the subject of increasing public, media and legislative concern. If our customers were to reduce their use of our products and services as a result of these concerns, our business could be materially harmed. As noted above, we are also subject to the possibility of security and privacy breaches, which themselves may result in a violation of these privacy

Selling our solutions and services internationally subjects us to various risks.

Expanding our GTM software solutions internationally is important to our growth and profitability. In the fiscal year ended December 31, 2018, 25% of our revenue was attributable to sales in international markets. We may further expand our sales efforts internationally to other countries, which will require financial resources and management attention and may subject us to new or increased levels of risk. We cannot be assured that we will be successful in creating new international demand for our solutions and services.

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 these risks effectively, it may harm the growth and profitability of our business.

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

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- •burdens of complying with a wide variety of foreign customs, laws and regulations, and with U.S. laws such as the Foreign Corrupt Practices Act
- •increased financial accounting and reporting burdens and complexities
- •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 or difficulty collecting international accounts receivable or longer accounts receivable payment cycles
- •less effective protection of intellectual property

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

We have a history of losses and we may not achieve or sustain profitability in the future.

We have incurred significant losses since our formation, including net losses of \$13.6 million in 2018, \$13.0 million in 2017, and \$18.7 million in 2016. As of December 31, 2018, we had an accumulated deficit of \$176.5 million. As part of our strategy to develop and expand our business, we have incurred significant sales and marketing expenses to attract additional customers, as well as research and development expenses to further develop our solutions and services. These efforts may not succeed in increasing our revenue sufficiently to offset these higher expenses. Any failure to increase our revenue or generate revenue from developing new modules and expanding our services could prevent us from attaining or increasing profitability. Furthermore, we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may result in continuing or greater losses in future periods. You should not consider our historical revenue growth rates to be indicative of our future performance. We cannot be certain that we will be able to attain profitability on a quarterly or annual basis, or if we do, that we will sustain profitability.

Uncertainty in global economic conditions may adversely affect our business, operating results or financial condition.

Our operations and performance depend on global economic conditions. Challenging or uncertain economic conditions make it difficult for our customers and potential customers to accurately forecast and plan future business activities, and may cause our customers and potential customers to slow, reduce or fail to commence spending on our solutions. Furthermore, during challenging or uncertain economic times, our customers may face difficulties gaining timely access to sufficient credit and experience decreasing cash flow, which could affect their willingness to make purchases and their ability to make timely payments to us. Global economic conditions have in the past, and could continue to have, an adverse effect on demand for our solutions, on our ability to predict future operating results and on our financial condition and operating results. If global economic conditions remain uncertain or deteriorate, it may materially affect our business, operating results and financial condition.

Significant developments stemming from the United Kingdom's departure from the EU could have a material adverse effect on us.

The United Kingdom vote authorizing its exit from the European Union (referred to as "Brexit") could over time create uncertainty for our business. For example, our relationships with European customers or prospective customers in the United Kingdom, data centers and other vendors, and employees could change in unpredictable ways and have an adverse effect on our business and could also have an adverse impact on our bookings. The outcome of negotiations about the specific terms of the United Kingdom's future relationship with the European Union are unpredictable. For example, important issues such as trade and tariff, immigration and commercial regulation may be modified during a transition period or permanently. In addition, Brexit could lead to legal uncertainty and divergent national laws and regulations where previously European Union laws and regulations prevailed, which may affect the need for our GTM solutions. Any of these effects of Brexit, and others we cannot anticipate, could adversely affect our business, business opportunities and our solutions.

Declines in new subscriptions or in the rate of renewal of our subscriptions 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.

In 2018, we derived 74% of our total revenue from subscription agreements. We recognize revenue from these subscriptions ratably over the term of the agreement, and accordingly, a substantial portion of our subscription revenue that we report in each period will be derived from the recognition of deferred revenue relating to subscriptions entered into in earlier periods. Therefore, downturns or upturns in new or renewal subscriptions may not be fully reflected in our current period operating results. If our new and renewal subscriptions in any period decline or fail to grow at a rate consistent with our historical trends, our revenue in future periods could fall short of analysts' expectations which, in turn, could adversely affect the price of our common stock.

Changes in financial accounting standards may adversely impact our results of operations.

New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. For example, in May 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes nearly all existing revenue recognition guidance under accounting principles generally accepted in the United States of America. We adopted this new standard on January 1, 2018, utilizing the modified retrospective transition approach. These and other changes to existing rules or the questioning of current practices may adversely affect our operating results.

We rely largely on our own employees to sell and implement our solutions and may be at a disadvantage compared to competitors that utilize external channels.

Many enterprise software companies, including some of our competitors, utilize multiple partner networks to sell and deploy their solutions. These partners can include consulting companies of national reputation who may have established relationships with our potential customers. The dedication of a national consulting company to a particular GTM offering enhances the reputation of that offering in the marketplace. To date, we have relied mainly on our own sales and professional services employees to sell and implement our solutions, which may put us at a competitive disadvantage. To increase our revenue and cash flows, we must regularly add new customers and maintain the ability to provide them with timely professional services. If we are unable to do so on our own, the market perception of our solutions could be harmed and we could suffer a material adverse effect on our business, results of operations and financial condition.

If we lose the services of our Chief Executive Officer or other members of our senior management team, it could impair our ability to execute our business strategy and our sales and profitability could suffer.

Our success and future growth depend on the skills, working relationships and continued services of our senior management team and in particular, our Chief Executive Officer, James W. Preuninger. In the event that we are unable to retain the services of any of these key contributors, we may be unable to execute our business strategy in a timely manner, if at all, which could adversely affect our business, operating results and financial condition.

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

Our success in the highly competitive GTM solutions market depends largely on our ability to attract, integrate and retain highly skilled managerial, solutions, engineering, trade content and sales and marketing personnel. Competition for these personnel in our industry is intense. We may not be able to attract and retain the appropriately qualified, highly skilled employees necessary for the development of our solutions and services and the growth of our business, or to replace personnel who leave our employ in the future. 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 global trade subject matter experts, information technology professionals and project managers, could make it difficult to meet key objectives, such as timely and effective upgrades and introductions, penetration and expansion into existing accounts and growth in the GTM solutions market.

Our growth is dependent upon the continued development and retention of our direct sales force and any failure to hire and/or retain these personnel may impede our growth.

We have invested extensively in our direct sales force. We believe that our future growth will depend on the continued development of this sales force and their ability to obtain new customers, particularly enterprise customers, and to manage our existing customer base. Our ability to achieve significant growth in revenue in the future will depend, in large part, on our success in recruiting, training and retaining a sufficient number of direct sales personnel. New sales personnel require significant training and may, in some cases, take more than a year before becoming productive, if at all. If we are unable to hire and develop sufficient numbers of productive direct sales personnel, sales of our GTM solutions and related services will suffer and our growth will be impeded.

We are exposed to exchange rate risks on foreign currencies that may adversely affect our business 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, the portion of our accounts receivable and payment obligations denominated in foreign currencies continues to increase. In addition, we incur significant costs related to our operations in India in Rupees, and we also incur costs related to our operations in China in RMD and in Hong Kong in HKD, which will continue 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. Our largest exposures to foreign exchange rates exist with respect to the British Pound, the Euro, the Rupee, the Hong Kong dollar and Renminbi, which together accounted for approximately 25% of our cost of revenue in 2018. We do not currently hedge our exposure to fluctuations in foreign 17

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 effect on our operating results.

Interruptions or delays in the delivery of our GTM solutions could impair the availability or use of our solutions, resulting in customer dissatisfaction, damage to our reputation, loss of customers, limited growth and reduction in revenue.

We host our GTM, SCC and CTM solutions for our cloud delivery model customers in appropriately located and highly secure co-location facilities, including Amazon Web Services. While we typically control and have access to the servers we operate in co-location facilities and the components of our custom-built infrastructure that are located in those co-location facilities, we control neither the operation of these facilities nor our third-party service providers. Furthermore, we have no physical access or control over the services provided by Amazon Web Services. Design or mechanical errors, power losses, spikes in usage volume, hardware failures, systems failures, communications failures, failure to follow system protocols and procedures, intentional bad acts, natural disasters, war, terrorist attacks or security breaches, including cyber-attacks, could cause our systems to fail, resulting in interruptions in our service. Other interruptions or delays in delivering our GTM, SCC and CTM solutions can result from changes to or termination of our arrangements with the owners of the facilities. The owners of our facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, we may be required to transfer to one or more new data center facilities, and we may incur significant costs and possible service interruption in doing so.

In addition, our Jacksonville, Florida data center's location may make it susceptible to tropical storms and hurricanes, which, depending on severity, could also cause interruptions or delays in the delivery of our solutions. All of our GTM solutions are hosted primarily from our Jacksonville facility, and our Carlstadt, New Jersey facility acts as a disaster recovery site that can host our solutions following a catastrophic event at our Jacksonville co-location facility. For customers who have not chosen real time replication of their data to our Carlstadt facility, it can take us a substantial amount of time to migrate them to Carlstadt and restore functionality for them.

Many of our customers may consider our GTM solutions to be "mission critical," and any delay in restoring our solutions may be unacceptable to customers. Although we conduct disaster recovery tests annually and are capable of bringing our solutions online following catastrophe scenarios, any equipment failures and delays in restoring our solutions could enable or otherwise cause our customers to terminate or not renew their subscriptions. In addition, they may damage our reputation with both existing and new customers and result in lost customers and decreased revenue, which could materially and adversely affect our business, revenue and results of operations.

If we fail to manage our international operations effectively, our business, financial condition and results of operations could be adversely affected.

We have offices in the United States, Germany, India and China, and we may continue our international expansion. Managing a geographically dispersed workforce in multiple time zones in compliance with diverse local laws and customs is challenging. If we fail to manage our international workforce effectively, our business, financial condition and results of operations could be adversely affected.

Political, economic, social and other factors in India and China may adversely affect our operations and our ability to achieve our business objectives.

We have offices in Bangalore, India, in which the majority of our engineers are situated. Since the early 1990s, the Indian government has been implementing an economic structural reform program with the objective of liberalizing India's exchange and trade policies, reducing the fiscal deficit, controlling inflation, promoting a sound monetary policy, reforming the financial sector, and placing greater reliance on market mechanisms to direct economic activity. While economic liberalization efforts in India continue, there can be no assurance that these economic reforms will persist, and that any newly elected government will continue the program of economic liberalization of previous governments.

India has also experienced terrorist attacks in the past decade. Religious and border disputes persist and remain pressing problems. Military hostilities and civil unrest in Afghanistan, Iraq and other Asian countries persist. These events could adversely influence the Indian economy and, as a result, materially and adversely affect our operations and our ability to achieve our business objectives.

We conduct our business in China through several Chinese subsidiaries. The results of operations and future prospects of our Chinese subsidiaries are subject to evolving economic, political and social developments in China. In particular, these results may be adversely affected by changes in China's political, economic and social conditions, changes in policies of the Chinese government, changes in laws and regulations or in the interpretation of existing laws and regulations, changes in foreign exchange regulations, measures that may be introduced to control inflation, and changes in the rates or methods of

taxation. Also, Chinese commercial laws, regulations and interpretations applicable to non-Chinese owned market participants such as us are continually changing. These laws, regulations and interpretations could impose restrictions on our ownership or operations of our interests in China and could have a material adverse effect on our business. Further, continued trade disputes between China and the United States, and the resulting escalation of tariffs, could adversely impact our operations in China and the demand for our software solutions.

Uncertainties with respect to the Chinese legal system may adversely affect the operations of our Chinese subsidiaries.

Our Chinese subsidiaries are subject to laws and regulations applicable to foreign investment in China. There are uncertainties regarding the interpretation and enforcement of laws, rules and policies in China. Because many laws and regulations are relatively new, the interpretations of many laws, regulations and rules are not always uniform. Moreover, the interpretation of statutes and regulations may be subject to government policies reflecting domestic political agendas. Finally, enforcement of existing laws or contracts based on existing law may be uncertain. As a result of the forgoing, it may be difficult for us to obtain swift or equitable enforcement of laws ostensibly designed to protect companies like ours, which could have a material adverse effect on our business and results of operations.

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

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to enhance existing and develop new modules, improve our operating infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. Any debt financing secured by us, currently or in the future, could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, we may not be able to obtain additional financing on terms favorable to us, if at all. We currently have an outstanding term loan facility with a maturity date of December 31, 2021. Upon maturity, we may not have the resources for repayment and there can be no assurance that an extension can be obtained, or obtained on terms acceptable to us. If we are unable to obtain adequate financing or financing on terms satisfactory to us when required, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired. In that case, we may not be able to, among other things, develop or enhance our solutions, expand our sales and marketing, acquire complementary technologies, solutions or businesses, expand operations in the United States or internationally, hire, train and retain employees, or respond to competitive pressures or unanticipated working capital requirements. Our failure to do any of these things could have a material adverse effect on our business, financial condition, and operating results.

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 with which tax authorities may disagree. 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 affect our effective tax rate. Recently enacted United States tax rules, including provisions that reduce or eliminate the deferral of United States income tax on our unrepatriated earnings, may require those earnings to be taxed at the U.S. federal income tax rate, reduce or eliminate our ability to claim foreign tax credits, and eliminate various tax deductions until foreign earnings are repatriated to the United States. At December 31, 2018, we had net operating loss carryforwards for federal income tax purposes of approximately \$91.2 million. Our future reported financial results may be adversely affected by tax rule changes which restrict or eliminate our ability to utilize net operating loss carry-forwards, claim foreign tax credits or deduct

expenses attributable to foreign earnings, or otherwise affect the treatment of our unrepatriated earnings. Our ability to use our net operating loss carryforwards may be subject to limitation.

Under IRC section 382, 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. We have completed an

IRC section 382 study through June 30, 2016, which concluded that we have experienced several ownership changes, causing limitations on the annual use of the net operating loss carryforwards. Provided there is sufficient taxable income, \$2.1 million of the net operating losses are expected to expire without utilization. Additionally, our ability to use our net operating loss carryforwards to reduce future taxable income may be further limited as a result of any future equity transactions, including, but not limited to an issuance of shares of our stock or sales of common stock by our existing stockholders.

Additionally, on December 22, 2017, the Tax Cuts and Jobs Act ("TCJA") was enacted and is generally effective for taxable years beginning after December 31, 2017. The TCJA is complex and includes significant amendments to the Code, including amendments that significantly change the value of our deferred tax assets related to net operating losses, and impose a mandatory one-time tax on the accumulated earnings of certain of our foreign subsidiaries. The application of accounting guidance for such items is currently uncertain, as compliance with the TCJA and the accounting for such provisions requires the accumulation of information not previously required or regularly produced. As additional regulatory guidance is issued by the applicable taxing authorities, as accounting treatment is clarified, as we perform additional analysis on the application of the law and as we refine estimates in calculating its effect, our final analysis, which will be recorded in the period completed, may be different from our current provisional amounts, which could materially affect our deferred taxes, tax obligations and accounting for income taxes.

Our loan and security agreement with our lender contains operating and financial covenants that may restrict our business and financing activities.

We are party to a credit agreement in connection with our term loan and revolving line of credit. Borrowings under the credit agreement are secured by substantially all of our assets, excluding intellectual property.

The operating and financial restrictions and covenants in the credit agreement, as well as any future financing agreements that we may enter into, restrict our ability to finance our operations, engage in business activities or expand or fully pursue our business strategies. Our ability to comply with these covenants may be affected by events beyond our control, and we may not be able to meet those covenants. From time to time we may be required to seek waivers, a forbearance or an amendment to the credit agreement in order to maintain compliance with these covenants, and there can be no certainty that any such waiver, amendment or forbearance will be available, or what the cost of such waiver, amendment or forbearance, if obtained, would be. A breach of any of these covenants could result in a default under the credit agreement, which could cause all of the outstanding indebtedness under our line of credit to become immediately due and payable, terminate all commitments to extend further credit and permit our lender to take possession of and sell our assets pledged as collateral.

If we are unable to generate sufficient cash available to repay our debt obligations when they become due and payable, either when they mature or in the event of a default, we may not be able to obtain additional debt or equity financing on favorable terms, if at all, which may negatively affect our ability to continue as a going concern.

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 depends in part upon our ability to protect our intellectual property rights in our software and other materials that we have developed internally. We hold no issued or pending patents and have relied largely on copyright, trade secret and, to a lesser extent, trademark laws, as well as confidentiality procedures and agreements with our employees, consultants, customers and vendors, to control access to, ownership of and distribution of technology, software, documentation and other confidential information. Despite these precautions, it may be possible for a third party to copy, reverse engineer or otherwise obtain, use or distribute our technology, software and/or documentation 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 copyright and trade secret laws offer us only limited protection and the laws of some foreign countries protect proprietary rights to an even lesser extent. Accordingly, defense of our proprietary technology may become an increasingly important issue as we continue to expand our operations and technology 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.

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We may elect to initiate litigation in the future to enforce or protect our proprietary rights or to determine the validity and scope of our rights or 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. For example, in 2011 a non-practicing entity claimed that our solutions infringed one of its patents. Although we successfully defended this claim, we cannot be certain that our solutions and services do not infringe the intellectual property rights of other third parties. Additionally, because our software is integrated with our customers' business processes and other software applications, third parties may bring claims of infringement or misappropriation against us, as well as our customers and other software suppliers. 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 asserted claim. In addition to possible claims with respect to our proprietary information, some of our solutions modules 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 and expensive to litigate or settle, and could divert management attention and financial resources. An adverse determination could prevent us from offering our modules or services to our customers and may require that we procure or develop substitute modules 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 and defend 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 customers and a third party, an adverse outcome in any such litigation could make it more difficult for us to defend our services and solutions 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 purchasing our solutions 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 solutions 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 new solutions modules or enhancements to existing modules, which could severely harm our business. Even if we are successful in defending against these claims, such litigation could result in substantial costs and distract management.

Risks Related to Ownership of Our Common Stock

The market price for our common stock may be volatile.

Fluctuations in the price of our common stock could contribute to the loss of all or part of your investment. The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our common stock. In such circumstances, the trading price of our common stock may not recover and may experience a further decline. Factors affecting the trading price of our common stock may

include:

- •actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us
- •changes in the market's expectations about our operating results
- •the effects of seasonality on our business cycle
- •success of competitive solutions and services

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- •our operating results failing to meet the expectation of securities analysts or investors in a particular period or failure of securities analysts to publish reports about us or our business
- •changes in financial estimates and recommendations by securities analysts concerning our company, the GTM market, or the software industry in general
- •operating and stock price performance of other companies that investors deem comparable to us
- •news reports relating to trends in global trade, including changes in estimates of the future size and growth rate of our markets
- •announcements by us or our competitors of acquisitions, new offerings or improvements, significant contracts, commercial relationships or capital commitments
- •our ability to market new and enhanced solution modules on a timely basis
- •changes in laws and regulations affecting our business
- •commencement of, or involvement in, litigation involving our company, our general industry, or both
- •changes in our capital structure, such as future issuances of securities or the incurrence of additional debt
- •the volume of shares of our common stock available for public sale
- •any major change in our board or management
- •sales of substantial amounts of common stock by our directors, executive officers or principal stockholders or the perception that such sales could occur
- •general economic and political conditions such as recessions, interest rates, fuel prices, international currency fluctuations and acts of war or terrorism

Broad market and industry factors may materially harm the market price of our common stock irrespective of our operating performance. The stock market in general and the market for technology companies and software companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of ours, may not be predictable. A loss of investor confidence in the market for technology or software stocks or the stocks of other companies which investors perceive to be similar to us, the opportunities in the GTM market or the stock market in general, could depress our stock price regardless of our business, prospects, financial conditions or results of operations.

In addition, in the past, following periods of volatility in the overall market and the market price of a company's securities, securities class action litigation has often been instituted against the affected company. This type of litigation, even if unsuccessful, could be costly to defend and distract our management.

The interests of certain stockholders may conflict with our interests or those of other stockholders, and their actions could disrupt our business and affect the market price and volatility of our securities.

Certain stockholders may take positions or make proposals with respect to, or with respect to potential changes in, among other things, our operations, management, management and employee incentives, our certificate of incorporation and bylaws, the composition of our Board of Directors, ownership, capital or corporate structure, potential acquisitions involving us, strategy, and plans. The foregoing positions or proposals may not in all cases be aligned with the interests of our other stockholders. Certain stockholders may have an interest in pursuing acquisitions, divestitures, and other transactions that, in their judgment, could enhance their investment, even though such transactions involve risks to our other stockholders.

Responding to actions by these or other stockholders can be costly, time-consuming, and disruptive to our operations and can divert the attention of management and our employees. Such activities could interfere with our ability to execute our business strategy. The perceived uncertainties as to our future direction also could affect the market price and volatility of our common stock.

We may be subject to unsolicited takeover activity, which could be disruptive to our business.

In the past we have received, and in the future, we may receive, unsolicited proposals to acquire our Company or our assets. For example, in February 2018, E2open, LLC ("E2open") made a public unsolicited proposal to acquire all of our outstanding common stock. This proposal was unanimously rejected on February 12, 2018 by our Board of Directors, which concluded that continuing to execute our existing strategic plan is the best means of maximizing value for our stockholders over the long term. On March 30, 2018, E2open withdrew its unsolicited proposal.

Responding to unsolicited takeover activity and proposals may divert management attention and may require us to incur significant costs. The unsolicited nature of such activity and proposals may disrupt our operations, which could have a significant adverse effect on our business and financial results. Responding to any such unsolicited takeover attempt may

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distract management attention away from our business and may require us to incur significant costs. Moreover, any unsolicited takeover attempt may disrupt our business by causing uncertainty among current and potential employees, producers, suppliers, customers and other constituencies important to our success, which could have a significant adverse effect on our business and financial results. Other disruptions to our business include potential adverse impacts on the timing of, and our ability to further our existing strategic plan. Any unsolicited proposal may adversely affect our financial condition and results of operations or cause our stock price to experience periods of volatility or stagnation, based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying prospects of our business. Each of these consequences, alone or in combination, could be disruptive to our business.

We could be negatively affected as a result of a proxy contest or related litigation.

In January 2019, we received notice that Altai Capital Osprey, LLC ("Altai") intends to nominate two candidates for election to our Board at the 2019 Annual Meeting. Although our Board has not made its recommendation with respect to the director elections for our 2019 Annual Meeting, it is possible that a proxy contest involving Altai, or another stockholder, will ensue.

Our Board and management strive to maintain constructive, ongoing communications with all of the Company's stockholders. While we welcome stockholder views and opinions with the goal of enhancing value for all stockholders and intend to engage in constructive dialogue with Altai and the Company's other stockholders, any proxy contest or related litigation could negatively affect the Company for a number of reasons, including but not limited to the following:

- •Responding to proxy contests, litigation and other actions by dissident stockholders is costly and time-consuming, disrupting our operations and diverting the attention of management and our employees;
- •Perceived uncertainties as to our future direction as a result of changes to the composition of our Board may damage morale, create instability among our management and employees, be exploited by our competitors or adversely impact existing and potential strategic and operational relationships and opportunities;
- •We may experience difficulties in hiring, retaining and motivating personnel during the resulting uncertainty;
- •The uncertainty created by any delay in certifying the election results of our 2019 Annual Meeting could further negatively impact the stability and morale of our management and employees;
- •If individuals are elected or appointed to our Board with a specific dissident agenda, it may adversely affect our ability to effectively and timely implement our current business plan and new strategies, which could have a material adverse effect on our results of operations and financial condition;
- •If certain corporate governance proposals are implemented that are not scaled to the size of our Company or do not provide benefits commensurate with their cost, our profitability as well as the value creation capabilities of our organization may be adversely affected;
- •Increases in legal fees, insurance, or proxy solicitation, administrative and associated costs incurred in responding to proxy contests and any related litigation may be substantial;
- •An agreement between the Company and a dissident stockholder to settle a proxy contest could allow a dissident stockholder to be reimbursed its expenses and result in substantial charges to the Company; and
- •A successful election outcome by a dissident stockholder who is also engaged in litigation against us could also potentially adversely affect the Company by resulting in an "insured v. insured exclusion" under our D&O insurance policy, which may exclude indemnification for claims against directors and officers alleged by other directors and officers or by other policyholders under the same policy. There may be a risk that our insurer would decline to cover claims, or that defense costs advanced by the Company during the pendency of the claim would later be determined to be not covered under the policy and would not be repaid or recovered. We cannot assure you that an adverse determination would not be made by our insurer which may have a material adverse effect on our business, financial condition and results of operations.

Any proxy contest, threat of a proxy contest or related litigation may adversely affect our financial condition and results of operations or cause our stock price to experience periods of volatility or stagnation, based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying prospects of our business.

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.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a non-binding advisory vote on executive compensation, which may make it more difficult for investors and securities analysts to evaluate our company. We may take advantage of these reporting exemptions until we are no longer an "emerging growth company" which may be as late as December 31, 2019. Certain of these exemptions may remain available to us after December 31, 2019 for as long as we remain a Smaller Reporting Company as defined by the Securities and Exchange Commission.

We currently intend to and continue to take advantage of some or all of the reduced regulatory and reporting requirements available to us so long as we qualify as an "emerging growth company," except that 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, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Additionally, 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. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and the market price of our common stock may be materially and adversely affected.

If we are unable to maintain effective internal control over financial reporting, investors could lose confidence in our consolidated financial statements and our company, which could have an adverse effect on our business

In order to provide reliable financial reports, mitigate the risk of fraud and operate successfully as a publicly traded company, we must maintain effective control over our financial reporting as required by Section 404 of the Sarbanes-Oxley Act of 2002.

and stock price.

We are required to assess the effectiveness of our internal control over financial reporting as of the end of each fiscal year. This assessment must include disclosure of any material weakness in our internal control over financial reporting that is identified by management. Once we are no longer an emerging growth company, our independent registered public accounting firm will also be required to consider our internal controls over financial reporting and express an opinion as to their effectiveness. If our management or our independent registered public accounting firm identifies one or more material weaknesses in our internal control over financial reporting, we will be unable to conclude that such internal control is effective. If we are unable to conclude that our internal control over financial reporting is effective, or, when we are no longer an emerging growth company, if our independent registered public accounting firm is unable to express an opinion that our internal control over financial reporting is effective, investors could lose confidence in the accuracy and completeness of our financial reports, which could have a materially adverse effect on our stock price.

In the third-quarter of fiscal year 2018, we determined a deficiency associated with the accounting for performance-based stock units. This deficiency did not have a material impact on our financial results, and we recorded an immaterial adjustment for the quarters ended March 31, 2018 and June 30, 2018. Management has concluded that the presence of the deficiency within the accounting process related to the performance-based stock units rose to a level of material weakness in our internal control over financial reporting as of March 31, 2018 and June 30, 2018. As of September 30, 2018, management remediated the material weakness by enhancing and adding additional review controls over the accounting for performance-based awards. We will continue to monitor these new controls and implement additional enhancements as needed but there can be no assurance that these new controls and enhancements will eliminate the risk of material weaknesses or significant deficiencies in our internal control over

financial reporting. If we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations and investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be adversely affected, and we could become subject to investigations by the stock exchange on which our securities are listed, the SEC, or other regulatory authorities, which could require additional financial and management resources.

We do not currently intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment 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 and covenants in our loan and security agreement also prevent us from paying cash dividends. 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 realize a gain 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 after accounting for any taxes. The price of our common stock may not appreciate in value or ever exceed the price at which our stockholders purchased their shares.

Anti-takeover provisions in our certificate of incorporation and 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 certificate of incorporation, 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: (i) dividing our board of directors into three classes with staggered three-year terms; (ii) denying cumulative voting rights to stockholders; (iii) specifying that directors may be removed by our stockholders only for cause upon the vote of two-thirds or more of our outstanding common stock; (iv) specifying that the authorized number of directors may be changed only by resolution of the board of directors; (v) eliminating the right of stockholders to act by written consent without a meeting; (vi) specifying that only our chairman of the board, Chief Executive Officer or the board of directors may call a special meeting of stockholders; (vii) limiting stockholder proposals to nominate director candidates to those for which timely advance notice was provided; and (viii) limiting stockholder amendments of the foregoing provisions to a vote of at least two thirds of our outstanding common stock. 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.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock.

Sales of our common stock by current stockholders may make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate, and make it more difficult for you to sell shares of our common stock.

We have registered and expect to continue to register on Form S-8 all shares of common stock that are issuable under our 2002 Stock Option Plan and 2012 Omnibus Incentive Compensation Plan. As a consequence, these shares can be freely sold in the public market upon issuance, subject to applicable limitations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in East Rutherford, New Jersey and consists of approximately 11,000 square feet of office space under a lease that expires in April 2024. We also lease office facilities in McLean, Virginia;

Raleigh, North Carolina; Munich, Germany; Bangalore, India; Shenzhen and Shanghai, China; and Hong Kong. We use all of these facilities primarily for sales, professional services, customer support and software engineering. We do not own any real property. We believe that our current facilities are suitable and adequate to meet our current needs. 25

Item 3. Legal Proceedings

We are involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our financial position, results of operations, or liquidity.

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

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

Market Information for our Common Stock

Our common stock has been listed on the New York Stock Exchange since March 21, 2014 under the symbol "AMBR". The following table sets forth for the periods indicated the high and low sales prices per share of our common stock, as reported by the New York Stock Exchange.

	2018 High	Low	High	2017 Low
First quarter	\$ 10.29	\$ 6.71	\$ 9.58	\$ 6.71
Second quarter	10.06	8.27	8.85	6.90
Third quarter	9.73	8.29	9.82	7.05
Fourth quarter	10.41	7.60	8.59	6.14

Holders of Record

As of March 1, 2019, there were 14 holders of record of our common stock (not including an indeterminate number of beneficial holders of stock held in 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. Covenants in our term loan and revolving line of credit agreements also prevent us from paying cash dividends. 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.

Securities Authorized for Issuance under Equity Compensation Plans

The information concerning our equity compensation plans is incorporated by reference from information contained under the section "Equity Compensation Plans" in our Proxy Statement for the 2019 Annual Meeting of Stockholders. 27

Stock Performance Graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of Amber Road, Inc. under the Securities Act of 1933, as amended, or the Exchange Act.

The graph below compares the cumulative total stockholder return on our common stock with the cumulative total return on the NYSE Composite Index and the Standard & Poor's Software & Services Select Industry Index for the five years ended December 31, 2018, assuming an initial investment of \$100. Data for the NYSE Composite Index and the Standard & Poor's Software & Services Select Industry Index assume reinvestment of dividends. The comparisons in the graph below are based upon historical data and are not indicative of, nor intended to forecast, future performance of our common stock.

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Item 6. Selected Financial Data

The following selected consolidated financial data should be read together with Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* and our consolidated financial statements and related notes in Item 8, *Financial Statements and Supplementary Data*. The selected consolidated financial data in this section are not intended to replace our consolidated financial statements and the related notes. Our historical results are not necessarily indicative of our future results. The selected consolidated statements of operations data for the years ended December 31, 2018, 2017, and 2016 and the consolidated balance sheet data as of December 31, 2018 and 2017 are derived from our audited consolidated financial statements contained in Item 8, *Financial Statements and Supplementary Data*. We derived the consolidated statements of operations data for the years ended December 31, 2015, and 2014 and the consolidated balance sheet data as of December 31, 2016, 2015, and 2014 from our audited consolidated financial statements not included in this Annual Report on Form 10-K.

	Year Ended De	ecember 31,		1		
Consolidated Statements of Operations Data:	2018	2017	2016		2015	2014
Total revenue	\$ 85,166,0	53\$ 79,076	5,110\$	73,161,19	6 7,109,92	20\$ 64,833,466
Total cost of revenue	38,151,009	37,741,567	35,736,	401	36,894,040	27,488,180
Gross profit	47,015,044	41,334,543	37,424,	789	30,215,880	37,345,286
Loss from operations	(11,847,465	5) (11,396,683)	(17,325	,809)	(26,961,817)	(26,878,274)
Net loss attributable to common stockholder	•	0) (12,977,486)	(18,726	,726)	(28,078,674)	(30,120,463)
Net loss per share:	•					
Basic and diluted	\$(0.49)	\$(0.47)	\$(0.70)		\$(1.07)	\$(1.46)
Weighted-a shares outstanding						
Basic and diluted	27,825,795	27,415,953	26,718,	882	26,152,301	20,623,760
A	as of December 3	1,				
	018 2	017	2016	20	015	2014
Consolidated Balance Sheet Data:						
Cash and						
cash \$	7,514,7199	9,360,60	1\$ 1	5,408,133\$	17,854,523	3\$ 41,242,200
equivalents	7.701.500	11 010 207	22.022.66	c 2:	0.702.054	50 011 760
I	7,731,503	21,010,387	22,922,666	3	0,792,054	50,811,768

Working capital, excluding current deferred revenue					
Total assets	100,102,977	99,370,045	110,489,088	114,623,744	108,230,657
Deferred revenue, current and long term	35,304,479	39,642,945	36,599,884	32,925,749	27,922,244
Term loan, net of discount	12,769,235	13,553,783	14,207,850	14,519,936	_
Revolving credit facility	6,000,000	6,000,000	6,000,000	5,000,000	_
Total stockholde equity	£29,777,555	25,499,952	32,571,478	44,496,315	64,958,707
	Year Ended I 2018	December 31, 2017	2016	2015	2014
Key Metrics (unaudited):	2010	2017	2010	2013	2014
Recurring revenue retention (1)	101%	103%	101%	98 %	100%
Adjusted EBITDA (2)	\$ 5,407,31	\$ 86,500	\$ (3,742,707)	\$ (10,484,749)	\$ 2,752,411

⁽¹⁾ We calculate our annualized recurring revenue retention rate by comparing, for a given quarter, subscription revenue for all customers in the corresponding quarter of the prior year to the subscription revenue from those same customers in the given quarter and calculating the average of the four quarters for the stated year.

⁽²⁾ Adjusted EBITDA. EBITDA consists of net loss plus depreciation and amortization, interest expense (income) and income tax expense. Adjusted EBITDA consists of EBITDA plus our non-cash, stock-based compensation expense, restricted stock expense, compensation expense related to loan forgiveness for certain executives, puttable stock compensation, changes in fair value of our warrant liability and contingent consideration liability, severance costs, purchase accounting deferred revenue adjustment, acquisition compensation costs and acquisition related costs. We use adjusted EBITDA as a measure of operating performance because it assists us in comparing performance on a consistent basis across reporting periods, as it

removes from our operating results the impact of our capital structure. We believe adjusted EBITDA is useful to an investor in evaluating our operating performance because it is widely used to measure a company's operating performance without regard to items such as depreciation and amortization, which can vary depending upon accounting methods and the book value of assets, and to present a meaningful measure of performance exclusive of our capital structure and the method by which assets were acquired.

Adjusted EBITDA is a financial measure that is not calculated in accordance with generally accepted accounting principles, or GAAP. We have provided below a reconciliation of adjusted EBITDA to net loss, the most directly comparable GAAP financial measure. Our use of adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are:

- •although depreciation and amortization are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements;
- •adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- •adjusted EBITDA does not reflect the potentially dilutive impact of equity-based compensation;
- •adjusted EBITDA does not reflect interest or tax payments that may represent a reduction in cash available to us; and •other companies, including companies in our industry, may calculate adjusted EBITDA differently, which reduces its usefulness as a comparative measure.

Because of these and other limitations, you should consider adjusted EBITDA together with other GAAP-based financial performance measures, including various cash flow metrics, net loss and our other GAAP results. The following table presents a reconciliation of net loss to adjusted EBITDA for each of the periods indicated:

	Year Ended Dec	ember 31,			, , , , , , , , , , , , , , , , , , ,
	2018	2017	2016	2015	2014
Net loss	\$ (13,602,52	26) (12,977,48	(18,726,72	26) (28,078,6°	7 \$) (27,703,958)
Depreciat	ion				
and amortizati expense	4,979,615 lon	5,386,789	6,590,343	7,575,783	4,896,713
Interest expense	1,271,786	976,834	862,321	910,046	275,074
Interest income	(8,741)	(4,806)	(57,126)	(61,414)	(2,009)
Income tax expense	492,010	608,775	595,722	268,225	552,619
EBITDA	(6,867,850)	(6,009,894)	(10,735,466)	(19,386,034)	(21,981,561)
Stock-bas compensa	ed .12,275,166 .tion	6,077,869	5,467,890	6,460,302	2,746,773
Restricted stock expense	l —	_	_	_	18,683,277
Compensa expense related to loan		_	_	_	927,093
forgivene	SS				
	_	_	_	54,764	54,764

Puttable stock compensation								
Change in fair value of contingent consideration liability	18,525		30,469		(1,350,4	41)	(43,855))
Warrant expense	_						1,244,63	35
Severance	_		_		_		1,121,28	35
Purchase accounting deferred — revenue adjustment	_		69,095		1,530,71	9	_	
Acquisition compensation costs	_		1,419,88	35	946,590		_	
Acquisition related — costs	_		5,420		1,259,35	51	_	
Adjusted \$ 5,407,316	\$	86,500	\$	(3,742,707	7)\$	(10,484,74	19)	2,752,411
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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 and cash flows should be read in conjunction with the audited consolidated financial statements and the related notes thereto included elsewhere in this Annual Report on Form 10-K. As discussed in the section titled "Cautionary Note Regarding Forward-Looking Statements," the following discussion and analysis contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included under Part I, Item 1A elsewhere in this Annual Report on Form 10-K.

Overview

As a leading provider of cloud based global trade management (GTM) solutions, our mission is to dramatically transform the way companies conduct global trade. We help companies create value through their global supply chain by improving margins, achieving greater agility and lowering risk. We do this by creating a comprehensive digital model of the global supply chain, which enables collaboration among buyers, sellers and logistics companies. We replace manual and outdated processes with full automation of import and export activities, and we also provide rich data analytics to uncover areas for optimization, and a platform that is responsive and flexible to adapt to the ever-changing nature of global trade.

We deliver our GTM solutions using a Software-as-a-Service (SaaS) model and leverage a highly flexible technology framework to quickly and efficiently meet our customers' unique requirements around the world. It can be delivered in individual modules or as a suite, depending on our customers' needs.

We sell our GTM solutions to many of the largest enterprises in the world, representing diversified industry verticals including Chemical/Pharmaceutical, High Technology/Electronics, Industrial/Manufacturing, Logistics, Oil & Gas, and Retail/Apparel. Our customers pay us subscription fees and implementation service fees for the use of our solutions under agreements that typically have an initial term of three to five years.

We face a variety of challenges and risks, which we will need to address and manage as we pursue our growth strategy. In particular, the growth of our business and our future success are dependent upon many factors, including our ability to innovate in the face of a rapidly changing technology landscape and changing regulatory environment, manage our future growth effectively and in a cost effective manner, grow and retain our customer base, including our base of large enterprise customers, expand deployment of our solutions within existing customers and focus on customer satisfaction. Our management team continuously focuses on these and other challenges. However, we cannot assure you that we will be successful in addressing and managing these and the many challenges and risks that we face.

Kev Metrics

We regularly review the following key metrics to evaluate our business, measure our performance, identify trends in our business, prepare financial projections and make strategic decisions.

Annualized Recurring Revenue Retention

We believe our annualized recurring revenue retention rate is an important metric to measure the long-term value of customer agreements with regard to revenue and billings visibility. We calculate our annualized recurring revenue retention rate by comparing, for a given quarter, subscription revenue for all customers in the corresponding quarter of the prior year to the subscription revenue from those same customers in the given quarter and calculating the average of the four quarters for the stated year. The annualized recurring revenue retention rate for the years ended December 31, 2018, 2017, and 2016 was 101%, 103%, and 101%, respectively.

Adjusted EBITDA

EBITDA consists of net loss plus depreciation and amortization, interest expense (income) and income tax expense. Adjusted EBITDA consists of EBITDA plus our non-cash, stock-based compensation expense, changes in fair value of contingent consideration liability, purchase accounting deferred revenue adjustment, acquisition compensation costs and acquisition related costs. We use adjusted EBITDA as a measure of operating performance because it assists us in comparing performance on a consistent basis across reporting periods, as it removes from our operating results the impact of our capital structure. We believe adjusted EBITDA is useful to an investor in evaluating our operating

performance because it is widely used to measure a company's operating performance without regard to items such as depreciation and amortization, which can vary depending upon accounting methods and the book value of assets, and to present a meaningful measure of performance exclusive of our capital structure and the method by which assets were acquired.

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Adjusted EBITDA is a financial measure that is not calculated in accordance with generally accepted accounting principles, or GAAP. We have provided below a reconciliation of adjusted EBITDA to net loss, the most directly comparable GAAP financial measure. Our use of adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are:

- •although depreciation and amortization are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements;
- •adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- •adjusted EBITDA does not reflect the potentially dilutive impact of equity-based compensation;
- •adjusted EBITDA does not reflect interest or tax payments that may represent a reduction in cash available to us; and •other companies, including companies in our industry, may calculate adjusted EBITDA differently, which reduces its usefulness as a comparative measure.

Because of these and other limitations, you should consider adjusted EBITDA together with other GAAP-based financial performance measures, including various cash flow metrics, net loss and our other GAAP results. The following table provides a reconciliation of net loss to adjusted EBITDA:

		r Ended December 31					
NI-41	2013		2017	(12 077 496)	2016	(10.72(.72()	
Net loss Depreciation	\$	(13,602,520)	\$	(12,977,486)	\$	(18,726,726)	
and amortization expense	4,9	79,615	5,386,789		6,590,343		
Interest expense	1,2	71,786	976,834		862,321		
Interest income	(8,	741)	(4,806)		(57,126)		
Income tax expense	492	2,010	608,775		595,722		
EBITDA	(6,	867,850)	(6,009,894)	(10,735,466))	
Stock-based compensation	12,	275,166	6,077,869		5,467,890		
Change in fair value of contingent consideration liability	_		18,525		30,469		
Purchase accounting deferred revenue adjustment			_		69,095		
Acquisition compensation costs	_		_		1,419,885		
Acquisition related costs	_		_		5,420		
	\$	5,407,316	\$	86,500	\$	(3,742,707)	

Adjusted EBITDA

Components of Operating Results

Revenue

We primarily generate revenue from the sale of subscriptions and subscription-related professional services. Our subscriptions are multi-year arrangements for software and content, and in certain instances include a transactional component. We derive professional services revenue from implementation, integration and other elements associated with solution and content subscriptions.

We typically invoice subscription customers in advance on an annual basis, with payment due upon receipt of the invoice. We reflect invoiced amounts on our balance sheet as accounts receivable or as cash when collected, and as deferred revenue until earned and recognized as revenue ratably over the performance period. Accordingly, deferred revenue represents the amount billed to customers that has not yet been earned or recognized as revenue, pursuant to agreements executed during current and prior periods, and does not reflect that portion of a contract to be invoiced to customers on a periodic basis for which payment is not yet due.

Subscription Revenue

We derive our subscription revenue from fees paid to us by our customers for access to our solutions. Typically, we recognize the revenue associated with subscription agreements ratably on a straight-line basis over the term of the agreement, provided all criteria required for revenue recognition have been met.

Professional Services Revenue

Professional services revenue consists primarily of fees charged for implementation, integration, training and other services associated with the subscription agreements entered into with our customers. Generally, we charge for professional services to implement our solutions on a time and materials basis.

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Cost of Revenue

Cost of Subscription Revenue

Cost of subscription revenue consists primarily of personnel and related costs of our hosting, support, and content teams, including salaries, benefits, bonuses, payroll taxes, stock-based compensation and allocated overhead, software license fees, hosting costs, Internet connectivity, depreciation expenses directly related to delivering our solutions, as well as amortization of capitalized software development costs. We generally expense our cost of subscription revenue as we incur the costs. We believe that our cost of subscription revenue for 2019, as a percentage of revenue, will be consistent with 2018 as we continue to scale the business.

Cost of Professional Services Revenue

Cost of professional services revenue consists primarily of personnel and related costs of our professional services team, including salaries, benefits, bonuses, payroll taxes, stock-based compensation, the costs of contracted third-party vendors, reimbursable expenses and depreciation, amortization and other allocated costs. As our personnel are employed on a full-time basis, our cost of professional services is largely fixed in the short-term, while our professional services revenue may fluctuate, leading to fluctuations in professional services gross profit. We expense our cost of professional services revenue as we incur the costs. We believe that our cost of professional services revenue for 2019, as a percentage of revenue, will be consistent with or slightly lower than 2018 as we continue to scale the business.

Operating Expenses

Our operating expenses are classified into three categories: sales and marketing, research and development, and general and administrative.

Sales and Marketing

Sales and marketing expenses primarily consist of personnel and related costs for our sales and marketing staff, including salaries, benefits, commissions, bonuses, payroll taxes and stock-based compensation. It also includes the costs of promotional events, corporate communications, online marketing, solution marketing and other brand-building activities, in addition to depreciation, amortization and other allocated costs. When the initial customer contract is signed and upon any renewal, we capitalize and amortize commission costs under Accounting Standards Codification Topic 606, Revenue from Contracts with Customers (ASC 606), as an expense over the estimated customer life of 6.0 years. If a subscription agreement is terminated, we recognize the unamortized portion of any deferred commission cost as an expense immediately upon such termination. We believe that our sales and marketing expenses for 2019, as a percentage of revenue, will be consistent with or slightly lower than 2018.

Research and Development

Research and development expenses primarily consist of personnel and related costs of our research and development staff, including salaries, benefits, bonuses, payroll taxes, stock-based compensation and costs of certain third-party contractors, as well as depreciation, amortization and other allocated costs. We capitalize development costs related to the development of our solutions modules and amortize them over their useful life. We have devoted our solutions modules development efforts primarily to enhancing the functionality and expanding the capabilities of our solutions. We believe that our research and development expenses for 2019, as a percentage of revenue, will be consistent with or slightly lower than 2018.

General and Administrative

General and administrative expenses primarily consist of personnel and related costs for our executive, administrative, finance, information technology, legal, accounting and human resource staffs, including salaries, benefits, bonuses, payroll taxes and stock-based compensation, professional fees, other corporate expenses and depreciation, amortization and other allocated costs. We believe that our general and administrative expenses for 2019, as a percent of revenue, will be lower than 2018.

Interest and Other Income (Expense)

Interest and other income (expense) consists primarily of interest income on our cash balances, and interest expense on outstanding debt and capital lease obligations.

Income Tax Expense

Because we have generated net losses in all periods to date and recorded a full valuation allowance against our deferred tax assets, we have historically not recorded a provision for federal or state income taxes. The tax provision

ended December 31, 2018 is predominantly related to foreign income taxes and is a result of the cost-plus transfer pricing agreements we have in place with our foreign subsidiaries, primarily in India, Germany and the United Kingdom. Realization of any of our deferred tax assets depends upon future earnings, the timing and amount of which are uncertain. Utilization of our net operating losses may be subject to annual limitations due to the ownership change rules under the Internal Revenue Code of 1986, as amended, and similar state provisions. We completed an Internal Revenue Code Section 382 study through June 2016, which concluded that we have experienced several ownership changes, causing limitations on the annual use of the net operating loss carryforwards. In the event we have future changes in ownership, the availability of net operating losses could be further limited.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with generally accepted accounting principles in the United States. The preparation of consolidated financial statements also requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ significantly from the estimates made by our management. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected. We believe that the estimates and judgments used for revenue recognition, stock-based compensation, goodwill, and capitalized software costs have the greatest potential impact on our consolidated financial statements, and consider these to be our critical accounting policies and estimates.

The following critical accounting policies reflect significant judgments and estimates used in the preparation of our consolidated financial statements:

- •revenue recognition;
- •stock-based compensation;
- •goodwill; and
- •capitalized software costs

Revenue Recognition

Effective January 1, 2018, we adopted the requirements of ASC 606, and all the related amendments (the new revenue standard) using the modified retrospective method. We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of accumulated deficit as of the adoption date. The adoption of the new standard reduced revenue due to the loss of services revenue from professional services billings delivered as of December 31, 2017 for on-premise installations of our software. Under the previous standard, revenue from these billings were deferred and amortized ratably over the subscription term of the related contract. Under the new standard, billings for professional services related to on-premise software installations are being recognized as revenue as services are performed. As the professional services were delivered previous to December 31, 2017, the amount included in deferred revenue as of that date will not be recognized in 2018 and beyond. We primarily generate revenue from the sale of subscriptions and subscription-related professional services. In instances involving subscriptions, revenue is generated under customer contracts with multiple elements, which are comprised of (1) subscription fees that provide the customers with access to our on-demand application and content, unspecified solution and content upgrades, and customer support, (2) professional services associated with consulting services (primarily implementation services), and (3) transaction-related fees (including publishing services). Our initial customer contracts usually have contract terms from 3 years to 5 years in length. Typically, the customer does not take possession of the software nor does the customer have the right to take possession of the software supporting the on-demand application service. However, in certain instances, we have customers that take possession of the software whereby the application is installed on the customer's premises. Our subscription service arrangements typically may only be terminated for cause and do not contain refund provisions.

We determine revenue recognition through the following steps:

- •Identification of the contract, or contracts, with a customer
- •Identification of the performance obligations in the contract
- •Determination of the transaction price
- •Allocation of the transaction price to the performance obligations in the contract

•Recognition of revenue when, or as, we satisfy a performance obligation 34

The subscription fees typically begin the first month following contract execution, whether or not we have completed the solution's implementation.

Subscription Revenue for Hosted and On-Premise Customers

Subscription revenue, which primarily consists of fees to provide customers access to our solution, is recognized ratably over contract terms beginning on the commencement date of each contract, which is the date our service is made available to customers. For contracts in which the customer takes possession of the software, we determined that the software license and related content updates are one performance obligation and accordingly, recognize the arrangement fee over the contract term. Typically, amounts that have been invoiced are recorded in accounts receivable and in deferred revenue or revenue, depending on whether the revenue recognition criteria have been met. Transaction-related revenue is recognized as the transactions occur.

Professional Services Revenue for Hosted Customers

Professional services revenue primarily consists of fees for deployment of our solutions. The majority of professional services contracts are on a time and material basis. When these services are not combined with subscription revenue as a single unit of accounting, as discussed below, this revenue is recognized as the services are rendered for time and material contracts, and when the milestones are achieved and accepted by the customer for fixed price contracts.

Professional Services Revenue for On-Premise Customers

For customers that take possession of the software, billings for professional services will be recognized as revenue when services are performed, unlike under the previous standard where revenue from these billings was deferred and amortized ratably over the subscription term of the related contract. The adoption of ASC 606 will reduce revenue due to the loss of deferred services revenue from professional services billings delivered prior to December 31, 2017 for on-premise installations of our software. Deferred revenue associated with on-premise professional services at December 31, 2017 will not be amortized in 2018 and beyond.

Multiple Performance Obligations

Some of our contracts with customers contain multiple performance obligations that generally include subscription, professional services (primarily implementation) as well as transaction-related fees.

For contracts with customers, we account for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. We determine the standalone selling prices based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the solutions sold, taking into account the modules included, term of the arrangement, and base transaction volume, customer demographics, and geographic locations. *Other Revenue Items*

Sales tax collected from customers and remitted to governmental authorities is accounted for on a net basis and, therefore, is not included in revenue and cost of revenue in the consolidated statements of operations. We classify customer reimbursements received for direct costs paid to third parties and related expenses as revenue, in accordance with ASC 606.

Deferred Revenue and Performance Obligations

Deferred revenue from subscriptions represents amounts collected from (or invoiced to) customers in advance of earning subscription revenue. Typically, we bill our annual subscription fees in advance of providing the service. Deferred revenue from professional services represents revenue for time and material contracts where the revenue is recognized when milestones are achieved and accepted by the customer for fixed price contracts.

Stock-Based Compensation

We recognize stock-based compensation as an expense in the consolidated financial statements and measure that cost based on the estimated fair value of the award. We recognize compensation expense for option awards based on the estimated grant date fair value using the Black Scholes option pricing model. Determining the fair value of stock-based awards at the grant date requires judgment. The determination of the grant date fair value of options using an option-pricing model is affected by our common stock fair value as well as assumptions regarding a number of other subjective variables.

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

For restricted stock units granted, we determine the fair value based on the closing price of our common stock as reported on The New York Stock Exchange on the date of grant.

For performance-based awards, compensation expense is recognized when satisfaction of the performance condition is considered probable. Satisfaction of the performance conditions is evaluated on a quarterly basis.

Goodwill

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. At December 31, 2018, we had \$43.7 million of goodwill recorded on our consolidated balance sheet. For the purposes of impairment testing, we have determined that we have one reporting unit. A two-step impairment test of goodwill is required pursuant to ASC 350-20-35. In the first step, the fair value of the reporting unit is compared to its carrying value. If the fair value exceeds the carrying value, goodwill is not impaired and further testing is not required. If the carrying value exceeds the fair value, then the second step of the impairment test is required to determine the implied fair value of the reporting unit's goodwill. The implied fair value of goodwill is calculated by deducting the fair value of all tangible and intangible net assets of the reporting unit, excluding goodwill, from the fair value of the reporting unit as determined in the first step. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, then an impairment loss must be recorded that is equal to the difference. The identification and measurement of goodwill impairment involves the estimation of the fair value of the company. The estimate of our fair value, based on the best information available as of the date of the assessment, is subjective and requires judgment, including management assumptions about expected future revenue forecasts and discount rates. We performed our annual impairment test as of December 31, 2018, and the second step was not required as the fair value exceeded the carrying value.

Capitalized Software Costs

Certain development costs related to our software products are capitalized in accordance with ASC Topic 350-40, Internal-Use Software. ASC 350-40 contains the following provisions: (1) preliminary project costs are expensed as incurred; (2) all costs associated with the development of the application are to be capitalized; and (3) all costs associated with the post-implementation operation of the software shall be expensed as incurred. In addition, the costs for all upgrades and enhancements to the originally developed software may be capitalized if additional functionality is added. Accordingly, we capitalize certain software development costs, including the costs to develop solution modules or significant enhancements to existing modules, which are developed or obtained for internal use. We capitalize software development costs when application development begins, it is probable that the project will be completed, and the software will be used as intended. Such capitalized costs are amortized on a straight-line basis over the estimated useful life of the related asset, which is generally five years. Costs associated with preliminary project stage activities, training, maintenance and all post-implementation stage activities are expensed as incurred. It is difficult to predict the amount of Internal-Use Software that will be capitalized in the future as it is project-specific and, as such, each project will be reviewed on a case-by-case basis.

Recent Accounting Pronouncements

For detailed information regarding recently issued accounting pronouncements and the expected impact on our consolidated financial statements, see Note 2, "Summary of Significant Accounting Policies and Practices" in the accompanying Notes to Consolidated Financial Statements.

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Results of Operations

The following tables summarize key components of our results of operations for the periods indicated, both in dollars and as a percentage of revenue. The period-to-period comparison of financial results is not necessarily indicative of financial results to be achieved in future periods.

	Year 2018	Ended December 31,	2017		2016	
Revenue:	2010				2010	
Subscription	\$	62,636,891	\$	58,479,139	\$	53,310,533
Professional services	22,	529,162	20,596,971		19,850,657	
Total revenue	85,	166,053	79,076,110		73,161,190	
Cost of revenue:						
Cost of subscription revenue	21,	557,794	21,151,419		19,922,839	
Cost of professional services revenue	16,	593,215	16,590,148		15,813,562	
Total cost of revenue	38,	151,009	37,741,567		35,736,401	
Gross profit	47,0	015,044	41,334,543		37,424,789	
Operating expenses:						
Sales and marketing	22,9	949,487	22,526,535		22,637,984	
Research and development	14,0	664,843	14,941,394		16,794,516	
General and administrative	21,2	248,179	15,263,297		15,318,098	
Total operating expenses	58,8	862,509	52,731,226		54,750,598	
Loss from operations	(11	,847,465)	(11,396,683))	(17,325,809)	•
Interest income	8,74	41	4,806		57,126	
Interest expense	(1,2)	271,786)	(976,834)		(862,321)	
Loss before income taxes	(13	,110,510)	(12,368,711))	(18,131,004))
Income tax expense	492	,010	608,775		595,722	
Net loss	\$	(13,602,520)	\$	(12,977,486)	\$	(18,726,726)
	Year	Ended December 31,				

Year Ended December 31, 2018 2017 2016

Revenue:

Subscription	7 <i>4</i> %	7 4 %	7 %
Professional	26	26	27
services	20	20	21
Total revenue	100	100	100
Cost of revenue:			
Cost of			
subscription	34	36	37
revenue (1)			
Cost of professional			
services revenue	74	81	80
(1)			
Total cost of	45	48	49
revenue	43	40	4 7
Gross profit	55	52	51
Operating			
expenses:			
Sales and	27	28	31
marketing	-,	20	
Research and	17	19	23
development			
General and	25	19	21
administrative			
Total operating expenses	69	66	75
Loss from			
operations	(14)	(14)	(24)
Interest income	0	0	0
Interest expense	(1)	(1)	(1)
Loss before	(15)	(15)	(25)
income taxes	(15)	(15)	(25)
Income tax	1	1	1
expense	1	1	1
Net loss	(1%)	(196)	(26)
(1) The table shows cost of revenue as a percentage of each			

cost of revenue as a percentage of each component of revenue.

Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

On January 1, 2018, we adopted ASC 606 using the modified retrospective method. The comparative information for 2017 has not been restated and continues to be reported under the accounting standards in effect for those periods. The adoption of ASC 606 reduced 2018 professional services revenue compared to 2017 due to the loss of the amortization of deferred services revenue from professional services billings delivered prior to December 31, 2017 for on-premise installations of our software. Also, under ASC 606, deferred commissions are amortized over an estimated customer life of six years, which differs from the previous standard whereby deferred commissions were amortized over the initial customer contract term. See Note 2 in our notes to the consolidated financial statements for an explanation of the effect the adoption of this standard had on our consolidated financial statements.

Revenue:	Year Ended December 31,						Change
	2018		2017		\$		%
Subscription	\$	62,636,891	\$	58,479,139	\$	4,157,752	7.%
Professional services	22,52	29,162	20,596,971		1,932,191		9.%
Total	\$	85,166,053	\$	79,076,110	\$	6,089,943	7 <i>‰</i>

Subscription Revenue. The increase was primarily related to increases in both enterprise and mid-market customers for 2018 compared to 2017. We have increased our customer count through our sales and marketing efforts.

Professional Services Revenue. The increase in professional services revenue was primarily due to projects from new customers and existing customer upgrades, which resulted in higher demand for our professional services compared to the prior year.

Total Revenue. Revenue from international customers accounted for 25% and 24% of total revenue for 2018 and 2017, respectively. For 2018, one customer accounted for 10.5% of our total revenue and for 2017, one customer accounted for 11.0% of our total revenue.

<u>Cost of</u> <u>Revenue:</u>	Year E	Ended December 31,		Change			
	2018		2017		\$		%
Cost of subscription revenue	\$	21,557,794	\$	21,151,419	\$	406,375	1.93
Cost of professional services revenue	16,59	93,215	16,590,148		3,067		0.93
Total cost of revenue	\$	38,151,009	\$	37,741,567	\$	409,442	1.%

Cost of Subscription Revenue. The increase was primarily due to an increase of \$0.4 million in employee-related compensation costs due to an increase in average headcount and a \$0.3 million increase in software maintenance costs that was offset by a decrease of \$0.2 million in outside services costs.

Cost of Professional Services Revenue. The slight increase was primarily due to an increase of \$0.3 million in employee-related costs, an increase of \$0.1 million in travel costs and a \$0.1 million increase in stock-based compensation costs. This was offset by a decrease of \$0.3 million for employee-related compensation costs transferred to our marketing and research and development groups as our professional services organization temporarily assisted these teams and a decrease of \$0.2 million in depreciation, amortization and other allocated costs.

Operating Expenses:	Year Ended December 31,	Year Ended December 31,					
<u> </u>	2018	2017	\$	%			

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Sales and marketing	\$	22,949,487	\$	22,526,535	\$	422,952	1.99
Research and development	14,66	4,843	14,941,394		(276,551)		(1%9)
General and administrative	21,24	8,179	15,263,297		5,984,882		3%2
Total operating expenses	\$	58,862,509	\$	52,731,226	\$	6,131,283	11/6

Sales and Marketing Expenses. The increase was primarily due to an increase of \$0.5 million for employee-related compensation costs, an increase of \$0.4 million for stock-based compensation expense, an increase of \$0.3 million for North American marketing events and an increase of \$0.3 million for costs transferred from our professional services organization as they temporarily assisted our marketing team. This was offset by a decrease of \$1.0 million in commissions, partially as a result of the adoption of ASC 606, a decrease of \$0.1 million in travel costs and a decrease of \$0.1 million for Asia marketing events.

Research and Development Expenses. The decrease was primarily due to \$1.8 million of higher software development costs capitalized in 2018 compared to 2017. This was offset by an increase of \$1.0 million in employee compensation costs and a \$0.6 million increase in stock-based compensation costs

General and Administrative Expenses. The increase was primarily due to an increase of \$4.9 million in stock-based compensation costs, an increase of \$0.8 million in employee-related compensation costs and an increase of \$0.3 million in depreciation, amortization and other allocated costs.

Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016

Revenue:	Year E	Year Ended December 31,					
	2017		2016		\$		%
Subscription	\$	58,479,139	\$	53,310,533	\$	5,168,606	9.%
Professional services	20,59	96,971	19,850,657		746,314		3.%
Total revenue	\$	79,076,110	\$	73,161,190	\$	5,914,920	8.%

Subscription Revenue. The increase was primarily related to increases in both enterprise and mid-market customers for 2017 compared to 2016. We have increased our customer count through our sales and marketing efforts.

Professional Services Revenue. The increase in professional services revenue was primarily due to projects from new customers and existing customer upgrades, which resulted in higher demand for our professional services compared to the prior year.

Total Revenue. Revenue from international customers accounted for 24% and 21% of total revenue for 2017 and 2016, respectively. For 2017, one customer accounted for 11% of our total revenue and for 2016, no single customer accounted for more than 10% of our total revenue.

<u>Cost of</u> <u>Revenue:</u>	Year I	Ended December 31,					Change
	2017		2016		\$		%
Cost of subscription revenue	\$	21,151,419	\$	19,922,839	\$	1,228,580	6. %
Cost of professional services revenue	16,59	90,148	15,813,562		776,586	,	4.95
Total cost of revenue	\$	37,741,567	\$	35,736,401	\$	2,005,166	5.%

Cost of Subscription Revenue. The increase was primarily for higher employee-related compensation costs of \$1.3 million related to higher average headcount, \$0.2 million for software maintenance costs, \$0.3 million for outside services and \$0.1 million for travel costs. This was offset by a decrease of \$0.6 million in depreciation, amortization and other allocated costs.

Cost of Professional Services Revenue. The increase was primarily for higher employee-related compensation costs of \$0.7 million related to higher average headcount.

<u>Operating</u> <u>Expenses:</u>	Year	Year Ended December 31,					
	2017		2016		\$		%
Sales and marketing	\$	22,526,535	\$	22,637,984	\$	(111,449)	(%5)
Research and development	14,9	41,394	16,794,510	5	(1,853,122	2)	(1%.0)

General and administrative	15,26	53,297	15,318,098		(54,801)		(0%4)
Total operating expenses	\$	52,731,226	\$	54,750,598	\$	(2,019,372)	(3%)

Sales and Marketing Expenses. The decrease was primarily due to decreased costs for North America and Asia marketing events of \$0.5 million that was offset by a \$0.4 million increase for commission costs.

Research and Development Expenses. The decrease was primarily due to a decrease of \$1.4 million of contingent compensation costs in 2016 related to the former ecVision founder and a \$1.0 million decrease in employee-related compensation costs due to lower average headcount. This was offset by an increase of \$0.8 million for lower software costs capitalized compared to 2016.

General and Administrative Expenses. The decrease was primarily due to decreases in travel costs, employee-related compensation costs, foreign exchange transaction costs, and depreciation, amortization and other allocated costs totaling \$0.6 million that was offset by an increases in miscellaneous taxes of \$0.3 million and professional fees of \$0.3 million.

Quarterly Results of Operations

Three Months Ended,

The following table sets forth our unaudited operating results for each of the eight quarters preceding and including the quarter ended December 31, 2018 and the percentages of revenue for each line item shown. The information is derived from our unaudited consolidated financial statements. In the opinion of management, our unaudited consolidated financial statements include all adjustments, consisting only of normal recurring items, except as noted in the notes to the financial statements, necessary for a fair statement of interim periods. The financial information presented for the interim periods has been prepared in a manner consistent with our accounting policies described elsewhere and should be read in conjunction therewith. These quarterly results are not necessarily indicative of the results that may be expected for any future period.

i nree Mo	ontus Ended,						
Mar 31, 2017	Jun 30, 2017	Sep 30, 2017	Dec 31, 2017	Mar 31, 2018	Jun 30, 2018	Sep 30, 2018	Dec 31, 2018
Revenue:							
Subscripsion3,901,	,3 % 8 14,686	,7 \$ 4 14,944	,1 6 0 14,946	,9 3 7 15,089	,1\$2 15,427	,4\$2 15,857,	4\$6 16,262,921
Professional services 4,653,248	3 4,988,541	5,269,090	5,686,092	4,975,280	5,628,933	6,303,562	5,621,387
Total revenue 18,554,55	66 19,675,285	20,213,250	20,633,019	20,064,392	21,056,355	22,160,998	21,884,308
Cost of revenue:							
Cost of subscription80,028 revenue	5,783,131	4,903,483	5,084,777	5,330,529	5,481,578	5,358,242	5,387,445
Cost of professional services revenue	6 4,126,958	4,247,519	4,193,925	4,321,138	4,304,357	4,102,453	3,865,267
Total cost of 9,401,774 revenue	9,910,089	9,151,002	9,278,702	9,651,667	9,785,935	9,460,695	9,252,712
Gross profit 9,152,782	9,765,196	11,062,248	11,354,317	10,412,725	11,270,420	12,700,303	12,631,596
Operating expenses:							
marketing	5 5,688,937	5,551,239	5,482,973	5,982,350	5,938,463	5,523,108	5,505,566
development	3,835,729	3,830,431	3,739,819	3,678,985	3,871,022	3,515,997	3,598,839
General and 3,806,707 administrative	3,923,928	3,517,187	4,015,475	5,739,540	4,997,582	4,840,543	5,670,514
Total operating 3,145,50 expenses	08 13,448,594	12,898,857	13,238,267	15,400,875	14,807,067	13,879,648	14,774,919
operations	6)(3,683,398)	(1,836,609)	(1,883,950)	(4,988,150)	(3,536,647)	(1,179,345)	(2,143,323)
Interest income 805	521	1,238	2,242	993	2639	3,029	2,080
Interest expense (235,168)	(244,183)	(272,293)	(225,190)	(299,599)	(339,571)	(325,253)	(307,363)
Loss before income taxes (4,227,089	9)(3,927,060)	(2,107,664)	(2,106,898)	(5,286,756)	(3,873,579)	(1,501,569)	(2,448,606)

Income

tax expense 186,107 590,411 130,039 (297,782) 127,081 77,661 113,201 174,067 (benefit)

See note 14 in our notes to the consolidated financial statements for a discussion of the immaterial correction of an error that is reflected in the March 31, 2018 and June 30, 2018 periods above.

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Three	Three Months Ended,							
Mar 31, 2017	Jun 30, 2017	Sep 30, 2017	Dec 31, 2017	Mar 31, 2018	Jun 30, 2018	Sep 30, 2018	Dec 31, 2018	
Revenue:								
Subs@ript		74%	72%	7 <i>5</i> %	73%	72%	74%	
Profession services	^{nal} 25	26	28	25	27	28	26	
Total 100 revenue	100	100	100	100	100	100	100	
Cost of								
revenue:								
Cost of								
sub Pripti revenue (1)	о в 9	33	34	35	36	34	33	
Cost								
of profession 86 services revenue (1)	nal 83	81	74	87	76	65	69	
Total								
of 51 revenue	50	45	45	48	46	43	42	
Gross								
profit Operating		55	55	52	54	57	58	
expenses:								
Sales an&1 marketing	29 g	27	27	30	28	25	25	
Research and 9 developm	19 ent	19	18	18	18	16	16	
General an&1 administra	20 ative	17	19	29	24	22	26	
Total operating expenses	68	63	64	77	70	63	67	
Loss fro(22) operation	(18) s	(8)	(9)	(25)	(16)	(6)	(9)	
Interest income	0	0	0	0	0	0	0	
Interest (1) expense	(1)	(1)	(1)	(1)	(2)	(1)	(1)	
Loss before income taxes	(19)	(9)	(10)	(26)	(18)	(7)	(10)	
Income tax ₁ expense (benefit)	3	1	(1)	1	0	1	1	
Net loss	(226)	(106)	(9%	(2%)	(1%)	(8%)	(1%)	

(1) The table shows cost of revenue as a percentage of each component of revenue.

We have experienced certain quarterly trends in our subscription and professional services revenues. In particular, our subscription revenue in the first quarter of certain years has been lower than the sequential fourth quarter of the prior year due to the transactional volumes associated with retail cycles.

Liquidity and Capital Resources

Year Ended De	cember 31,						
2018		2017		2016			
Cash							
provided							
by							
(used							
in):							
Operating activities	3,548,432	\$	(669,864)	\$	(165,823)		
Investing (3,553,877) activities		(1,90	7,140)	(2,912,750))		
Financing (1,445,836) activities		(3,24	2,878)	1,086,700			
		Decem	ber 31,				
		2018		2017			
Cash and cash	equivalents			\$	7,514,719	\$	9,360,601
Accounts rece	ivable, net			17,171,777		16,957,044	

Historically, we have financed our operations through the sale of stock and borrowing from credit facilities. Our principal sources of liquidity are our cash and cash equivalents, our accounts receivable, cash from operations and borrowings from our credit facility. We bill our customers in advance for annual subscriptions, while professional services are typically billed on a monthly basis as services are performed. As a result, the amount of our accounts receivable at the end of a period is driven significantly by our annual subscription and professional services billings for the last month of the period, and our cash flows from operations are affected by our collection of amounts due from customers for subscription and professional services billings that resulted in the recognition of revenue in a prior period.

Net Cash Flows from Operating Activities

For 2018, net cash provided by operating activities was \$3.5 million, which reflects our net loss of \$13.6 million, adjusted for non-cash charges of \$17.5 million consisting primarily of \$12.3 million for stock-based compensation and \$5.0 million for depreciation and amortization. Additionally, we had a decrease in our working capital accounts of \$0.3 million consisting of a \$1.0 million decrease in deferred revenue, a \$0.6 million decrease in accounts receivable, a decrease of \$0.2

million in accounts payable and a \$0.9 million decrease in prepaid expenses and other assets. This was offset by an increase of \$2.1 million in accrued expenses.

For 2017, net cash used in operating activities was \$0.7 million, which reflects our net loss of \$13.0 million, adjusted for non-cash charges of \$12.1 million consisting primarily of \$6.1 million for stock-based compensation and \$5.4 million for depreciation and amortization. Additionally, we had an increase in our working capital accounts consisting primarily of an increase of \$3.0 million in deferred revenue, a \$1.6 million increase for accounts receivable and a \$1.3 million increase in prepaid expenses. This was offset by a decrease of \$3.0 million in accrued expenses and a decrease of \$2.4 million for the settlement of contingent acquisition compensation related to the ecVision acquisition. For 2016, net cash used in operating activities was \$0.2 million, which reflects our net loss of \$18.7 million, adjusted for non-cash charges of \$14.1 million consisting primarily of \$5.5 million for stock-based compensation and \$6.6 million for depreciation and amortization. Additionally, we had a \$4.5 million increase in our working capital accounts consisting primarily of an increase of \$4.2 million in accrued expenses and an increase of \$3.7 million in deferred revenue. This was offset by a decrease of \$2.1 million of other liabilities and an increase of \$1.4 million in prepaid expenses and other assets.

Our deferred revenue was \$35.3 million at December 31, 2018 and \$39.6 million at December 31, 2017. The increases and decreases in deferred revenue at the end of each of these periods reflect the timing of invoicing to new and existing customers offset by amortization of previously billed subscription agreements. Customers are invoiced annually in advance for their annual subscription fee and the invoices are recorded in accounts receivable and deferred revenue, which is then recognized ratably over the term of the subscription agreement. The adoption of ASC 606 on January 1, 2018, required us to change how we account for professional service contracts for on-premise customers, which resulted in a reduction to deferred revenue of \$3.4 million on January 1, 2018. See Note 2 to our consolidated financial statements for the full impact of the adoption of ASC 606.

Net Cash Flows from Investing Activities

For 2018, net cash used in investing activities was \$3.6 million, consisting of capital expenditures of \$0.2 million and \$3.2 million for the capitalization of software development costs. In general, our capital expenditures are for our network infrastructure to support our increasing customer base and growth in new business and for internal use, such as equipment for our employees.

For 2017, net cash used in investing activities was \$1.9 million, consisting of capital expenditures of \$0.3 million and \$1.5 million for the capitalization of software development costs.

For 2016, net cash used in investing activities was \$2.8 million, consisting of capital expenditures of \$0.2 million and \$2.3 million for the capitalization of software development costs.

Net Cash Flows from Financing Activities

For 2018, net cash used in financing activities was \$1.4 million and was primarily for term loan repayments of \$0.8 million and capital lease repayments of \$1.5 million. This was offset by cash received of \$0.9 million for the exercise of stock options.

For 2017, net cash used in financing activities was \$3.2 million and was primarily for term loan repayments of \$0.7 million, capital lease repayments of \$1.6 million and a \$1.3 million payment for contingent consideration related to the ecVision acquisition.

For 2016, net cash provided by financing activities was \$1.1 million and consists of net proceeds of \$1.0 million from our revolving credit facility and proceeds from the exercise of stock options of \$1.9 million. This was offset by term loan repayments of \$0.4 million and capital lease repayments of \$1.4 million.

Credit Agreement

In March 2015, we entered into a credit agreement (the Credit Agreement) providing for financing comprised of (i) a senior secured term loan facility (the Term Loan) of \$20.0 million, and (ii) a senior secured revolving credit facility (the Revolver) that was subsequently amended to a borrowing limit of \$15.0 million, and which includes a \$2.0 million sublimit for the issuance of letters of credit. The Credit Agreement contains customary affirmative and negative covenants for financings of its type that are subject to customary exceptions. As of December 31, 2018, we were in compliance with all the reporting and financial covenants. In February 2017, we negotiated to extend the maturity date for both the Term Loan and the Revolver to December 31, 2019. On December 26, 2018, we negotiated to extend the maturity date for both the Term Loan and the Revolver to December 31, 2021.

The outstanding balance for the Term Loan as of December 31, 2018 was \$12.8 million, net of unaccreted discount and deferred financing costs of \$105,765, and the outstanding balance under the Revolver was \$6.0 million. For the year ended December 31, 2018, the weighted average interest rate was 5.44% for the Term Loan and 6.16% for the Revolver.

Off-Balance Sheet Arrangements

As of December 31, 2018, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. Other than our operating leases for office space, we do not engage in off-balance sheet financing arrangements. Our operating lease arrangements do not and are not reasonably likely to have a material current or future effect on our financial condition, results of operations, liquidity, capital resources and capital expenditures. In addition, we do not engage in trading activities involving non-exchange traded contracts. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in these relationships.

Capital Resources

Historically, we have incurred net losses and negative cash flows from operations and have an accumulated deficit of \$176.5 million as of December 31, 2018. For the year ended December 31, 2018, we generated positive cash flows from operations. Our primary sources of liquidity have been proceeds from our initial public offering, cash and cash equivalents, accounts receivable, cash from operations and borrowings from our credit facility.

Additional financing may be required for us to successfully implement our growth strategy. There can be no assurance that additional financing, if needed, can be obtained on terms acceptable to us. Our ability to maintain successful operations will depend on, among other things, new business, the retention of customers, and the effectiveness of sales and marketing initiatives. If anticipated revenue growth is not achieved, we may be required to curtail spending to reduce cash outflows.

Based upon our existing cash and cash equivalents balance, borrowings and our projected operating results, management believes that we have adequate resources to satisfy our liquidity requirements through at least the first half of 2020.

Contractual and Commercial Commitment Summary

The following table summarizes our contractual obligations as of December 31, 2018. These contractual obligations require us to make future cash payments.

	Payments Due by Period								
	Total	Less Than 1 Year		1-3 Years		3-5 Years		More 5 Yea	Than rs
Contractual Obligations:									
Operating lease commitment		\$	4,296,528	\$	4,114,093	\$	1,367,629	\$	157,021
Capital lease commitment	2,732,135	1,431,29	06	1,147,04	1	153,79	8		
Term loan	12,875,000	750,000		12,125,00	00	_		_	
Revolving credit facility	6,000,000	_		6,000,000	0	_		_	
Total	\$ 31,542,406	\$	6,477,824	\$	23,386,134	\$	1,521,427	\$	157,021

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Foreign Currency Exchange Risk. We bill our customers predominately in U.S. dollars and receive payment predominately in U.S. dollars. However, 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, the portion of our accounts receivable denominated in foreign currencies may continue to increase. Historically, our greatest accounts receivable foreign currency exposure has been related to revenue denominated in Euros. In addition, we incur significant costs related to our operations in India in Rupees, in China in Renminbi and Hong Kong dollars. As a result of these factors, our results of operations and cash flows are and will increasingly be subject to fluctuations due to changes in foreign currency exchange rates.

Interest Rate Sensitivity. Interest income is sensitive to changes in the general level of U.S. interest rates. However, based on the nature and current level of our investments, which are primarily cash and cash equivalents, we believe there is no material risk of exposure. Although interest expense related to our Term Loan and Revolver is sensitive to changes in the Prime rate and the LIBOR rate, we believe that we have no material risk of exposure.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements and accompanying notes and the report of our independent registered public accounting firm are listed in Part IV starting on page F-1.

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

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

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, 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) of the Securities Exchange Act of 1934, as amended, an evaluation as of December 31, 2018 was conducted under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act). Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures, as of December 31, 2018, were effective for the purposes stated above.

Changes in Internal Control over Financial Reporting

There were no other changes in our internal control over financial reporting during the quarter ended December 31, 2018, which were identified in connection with management's evaluation required by Rules 13a-15(d) and 15d-15(d) under the Exchange Act that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of our internal control over financial reporting based on the criteria set forth in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the assessment, management has concluded that its internal control over financial reporting was effective as of December 31, 2018 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP. This annual report did not include an attestation report of our registered public accounting firm due to the exemption provided by the rules of the Securities and Exchange Commission for emerging growth companies.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this item is incorporated by reference from information contained under the sections "Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" in our Proxy Statement for the 2019 Annual Meeting of Stockholders.

Item 11. Executive Compensation

Information required by this item is incorporated by reference from information contained under the section "Executive Compensation" and "Director Compensation" in our Proxy Statement for the 2019 Annual Meeting of Stockholders.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters Information required by this item is incorporated by reference from information contained under the section "Security Ownership of Certain Beneficial Owners and Management" in our Proxy Statement for the 2019 Annual Meeting of Stockholders.

Item 13. Certain Relationships and Related Transactions and Director Independence

Information required by this item is incorporated by reference from information contained under the section "Certain Relationships and Related Party Transactions" in our Proxy Statement for the 2019 Annual Meeting of Stockholders.

Item 14. Principal Accounting Fees and Services

Information with respect to this item is incorporated by reference from information under the section "Ratification of Appointment of Independent Registered Public Accounting Firm" in our Proxy Statement for the 2019 Annual Meeting of Stockholders.

PART IV

Item 15. Exhibits and Financial Statement Schedules

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

1. Financial Statements:

Our consolidated financial statements and the Report of Independent Registered Public Accounting Firm are included herein on page F-1

2. Financial Statement Schedules:

The financial statement schedules are omitted as they are either not applicable or the information required is presented in the financial statements and notes thereto on page F-1

3.Exhibits:

See Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.

Item 16. Form 10-K Summary

None.

SIGNATURES

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

AMBER ROAD, INC.

Date:
March By:
5, 2019

/s/ JAMES W. PREUNINGER

James W.
Preuninger
Chief Executive
Officer and
Director
(Principal
Executive
Officer)

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ JAMES W. PREUNINGER	Chief Executive Officer and Director	March 5, 2019
James W. Preuninger	(Principal Executive Officer)	
/s/ THOMAS E. CONWAY	Chief Financial Officer	March 5, 2019
Thomas E. Conway	(Principal Financial and Accounting Officer)	
/s/ PAMELA F. CRAVEN	Director	March 5, 2019
Pamela F. Craven		
/s/ RALPH FAISON	Director	March 5, 2019
Ralph Faison /s/ RUDY C. HOWARD Rudy C. Howard	Director	March 5, 2019

/s/ BARRY M. Director March 5, 2019

Barry M. V. Williams

EXHIBIT INDEX

		Incorporated by Reference			
Exhibit Number	Exhibit Description	Form	Exhibit	Filing Date	
2.1	Merger Agreement, dated as of March 2, 2015, among ecVision (International) Inc., Project 20/20 Acquisition Corp., the Registrant and Fortis Advisors LLC.	8-K	2.1	3/6/15	
3.1	Form of Amended and Restated Certificate of Incorporation of the Registrant effective March 26, 2014.	S-1/A	3.1	3/5/14	
3.2	Amended and Restated Bylaws of the Registrant effective March 26, 2014.	S-1	3.2	2/10/14	
4.1	Specimen Common Stock Certificate of Amber Road, Inc.	S-1/A	4.1	3/5/14	
10.1	Data Center and General Services Agreement, dated as of November 1, 2009, between Florida Technology Managed Services, Inc. and the Registrant.	S-1	10.1	2/10/14	
10.2	Amendment 1 to Data Center and General Services Agreement, dated as of November 1, 2012, between Registrant and Florida Technology Managed Services, Inc.	S-1	10.2	2/10/14	
10.3	Form of Change in Control Agreement.	S-1	10.6	2/10/14	
10.4*	2002 Stock Option Plan, as amended.	S-1	10.7	2/10/14	

10.5*	Form of Employee Stock Option Agreement under the 2002 Stock Option Plan, as amended.	S-1	10.8	2/10/14	
10.6*	Form of Director Stock Option Agreement under the 2002 Stock Option Plan, as amended.	S-1	10.9	2/10/14	
10.7*	2012 Omnibus Incentive Compensation Plan as amended and restated effective March 10, 2017.	DEF 14A			3/10/17
10.8*	Form of Stock Option Agreement for officers and employees under 2012 Omnibus Incentive Compensation Plan.	S-1/A	10.11	3/5/14	
10.9*	Form of Stock Option Agreement for directors under 2012 Omnibus Incentive Compensation Plan.	S-1/A	10.12	3/5/14	
10.10*	Form of	S-1	10.13	2/10/14	
10.12	Office Lease by and between the Metropolitan Life Insurance Company and the Registrant, dated as of October 5, 1998, as amended.	S-1	10.15	2/10/14	
10.13	Deed of Lease by and between MEPT 1660 International Drive LLC and the Registrant, dated as of June 14, 2011.	S-1	10.16	2/10/14	
10.14	Lease Agreement by and between PFRS Crossroads	S-1	10.17	2/10/14	

	Corp. and the Registrant, dated as of April 30, 2010.			
10.15	Lease Deed, dated November 8, 2013, between M/s. Paliwal Overseas Private Limited and M/s. Amber Road Software Private Limited.	S-1	10.21	2/10/14
10.16*	Form of Management Severance Policy.	S-1/A	10.22	3/5/14
10.17*	Employment agreement with Kae-por Chang.	S-1/A	10.23	3/5/14
10.18‡	Amendment 2 to Data Center and General Services Agreement, dated as of November 1, 2014, between the Registrant and Florida Technology Managed Services, Inc.	10-Q	10.24	11/7/14
10.19	Credit Agreement, dated as of March 4, 2015, between the Registrant and KeyBank National Association.	8-K	10.1	3/6/15
10.20**	Form of 2018 Restricted Stock Unit Award Agreement.			
10.21**	Form of 2018 Performance Share Unit Award Agreement.			
10.22	Form of Non-Employee Director Restricted Stock Units Award Agreement.	10-K	10.28	3/13/15
10.23	Amendment No.1 to Credit Agreement, dated as of March 4, 2015, between the Registrant and KeyBank	10-Q	10.1	11/9/15

	National Association.			
10.24*	Employment Agreement, dated May 5, 2016 between Amber Road, Inc. and James W. Preuninger	10-Q	10.1	5/9/16
10.25	Amendment No.3 to Credit Agreement, dated as of March 4, 2015, between the Registrant and KeyBank National Association.	10-Q	10.1	5/10/18
10.26**	Amendment No.4 to Credit Agreement, dated as of March 4, 2015, between the Registrant and KeyBank National Association.			
21.1**	Subsidiaries of the Registrant.			
23.1**	Consent of KPMG LLP, independent registered public accounting firm.			
31.1**	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.			
31.2**	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.			
32.1***	Certification of Chief Executive Officer pursuant to 18 U.S.C.			
32.2***	1350. Certification of Chief Financial			

101.INS**	Officer pursuant to 18 U.S.C. 1350. XBRL Instance Document - the instance document does not appear in the Interactive Data
	File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH**	XBRL Taxonomy Extension Schema Linkbase Document.
101.CAL**	XBRL Taxonomy Calculation Linkbase Document.
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Incorporated by Reference

		Incorporated by Reference				
	Exhibit Description	Form	Exhibit	Filing Date		
	XBRL					
	Taxonomy					
101 DE	Extension F**					
101.DL	Definition					
	Linkbase					
	Document.					
	XBRL					
	Taxonomy					
101.LA	B .#abel					
	Linkbase					
	Document.					
	XBRL					
	Taxonomy					
101.PR	H*resentation					
	Linkbase					
	Document.					
* Indica	ites					
manage	ment contract					
_	ensatory plan					
or agree						

‡ Portions of this exhibit have been omitted pursuant to a request for confidential treatment and have been separately filed with the Securities and Exchange Commission.

** Filed herewith *** Furnished herewith

AMBER ROAD, INC. AND SUBSIDIARIES **Index To Consolidated Financial Statements**

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	<u>F-2</u>
Consolidated Balance Sheets as of December 31, 2018 and 2017	<u>F-3</u>
Consolidated Statements of Operations for the Years Ended December 31, 2018, 2017, and 2016	<u>F-4</u>
Consolidated Statements of Comprehensive Loss for the Years Ended December 31, 2018, 2017, and 2016	<u>F-5</u>
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2018, 2017, and 2016	<u>F-6</u>
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017, and 2016	<u>F-7</u>
Notes to Consolidated	<u>F-8</u>

Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Amber Road, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Amber Road, Inc. and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers in 2018 due to the adoption of Accounting Standards Codification Topic 606 - *Revenue from Contracts with Customers*.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2003. Philadelphia, Pennsylvania March 5, 2019

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AMBER ROAD, INC. AND SUBSIDIARIES Consolidated Balance Sheets

	December 2018	r 31,	2017		
Assets					
Current assets:					
Cash and cash equivalents	\$	7,514,719	\$	9,360,601	
Accounts receivable, net	17,171,	,777	16,957,044		
Unbilled receivables	1,004,4	47	884,104		
Deferred commissions	4,023,4	73	4,400,015		
Prepaid expenses and other current assets		662	1,715,534		
Total current assets	31,692,	.078	33,317,298		
Property and equipment, net	10,132,	808	9,370,104		
Goodwill	43,731,	,942	43,768,269		
Other intangibles, net	3,953,5	82	4,999,885		
Deferred commissions	9,092,5	91	6,734,326		
Deposits and other assets	1,499,9	76	1,180,163		
Total assets	\$	100,102,977	\$	99,370,045	
Liabilities and Stockholders' Equity					
Current liabilities:					
Accounts payable	\$	2,473,289	\$	2,650,582	
Accrued expenses	9,509,166		7,589,482		
Current portion of capital lease obligations	1,263,3	75	1,352,456		
Deferred revenue	35,039,	.155	37,812,239		
	714,74	5	714,391		

Current portion of term loan, net of discount		
Total current liabilities	48,999,730	50,119,150
Capital lease obligations, less current portion	1,197,399	1,461,101
Deferred revenue, less current portion	265,324	1,830,706
Term loan, net of discount, less current portion	12,054,490	12,839,392
Revolving credit facility	6,000,000	6,000,000
Other noncurrent liabilities	1,808,479	1,619,744
Total liabilities	70,325,422	73,870,093
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Common stock, \$0.001 par value; 100,000,000 shares authorized; issued and outstanding 27,841,498 and 27,288,985 shares at December 31, 2018 and 2017, respectively	27,842	27,289
Additional paid-in capital	208,349,895	195,203,097
Accumulated other comprehensive loss	(2,097,434)	(1,822,396)
Accumulated deficit	(176,502,748)	(167,908,038)

Total

stockholders' 29,777,555 25,499,952

equity

Total liabilities

and stockholders' \$ 100,102,977 \$ 99,370,045

equity

See accompanying notes to consolidated financial statements.

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AMBER ROAD, INC. AND SUBSIDIARIES Consolidated Statements of Operations

	Year Ended December 31, 2018		2017		2016	
Revenue:						
Subscription	\$	62,636,891	\$	58,479,139	\$	53,310,533
Professional services	22,5	529,162	20,596,971		19,850,657	
Total revenue	85,	166,053	79,076,110		73,161,190	
Cost of revenue (1):						
Cost of subscription revenue	21,5	557,794	21,151,419		19,922,839	
Cost of professional services revenue	16,5	593,215	16,590,148		15,813,562	
Total cost of revenue	38,	151,009	37,741,567		35,736,401	
Gross profit	47,0	015,044	41,334,543		37,424,789	
Operating expenses (1):	8					
Sales and marketing	22,9	949,487	22,526,535		22,637,984	
Research and development	14,6	564,843	14,941,394		16,794,516	
General and administrative	21,2	248,179	15,263,297		15,318,098	
Total operating expenses	58,8	362,509	52,731,226		54,750,598	
Loss from operations	(11,	847,465)	(11,396,683)		(17,325,809)	
Interest income	8,74	4 1	4,806		57,126	
Interest expense	(1,2)	71,786)	(976,834)		(862,321)	
Loss before income taxes	e (13,110,510)		(12,368,711)		(18,131,004)	
Income tax expense	492,010		608,775		595,722	
Net loss	\$	(13,602,520)	\$	(12,977,486)	\$	(18,726,726)
Net loss per share (Note 11):						
Basic and diluted	\$	(0.49)	\$	(0.47)	\$	(0.70)

Weighted-average shares outstanding (Note 11):

Basic and diluted 27,825,795 27,415,953 26,718,882

(1) Includes stock-based compensation as follows:

	Year Ended December 31,					
	2018	;	2017		2016	
Cost of subscription revenue	\$	895,477	\$	767,877	\$	810,455
Cost of professional services revenue	661	,499	549,378		480,160	
Sales and marketing	1,4	35,055	1,015,307		872,899	
Research and development	2,0	36,305	1,404,771		1,161,422	
General and administrative	7,2	46,830	2,340,536		2,142,954	
	\$	12,275,166	\$	6,077,869	\$	5,467,890

See accompanying notes to consolidated financial statements.

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AMBER ROAD, INC. AND SUBSIDIARIES Consolidated Statements of Comprehensive Loss

	Year Ended December 31,						
	2018	3	2017		2016		
Net loss	\$	(13,602,520)	\$	(12,977,486)	\$	(18,726,726)	
Other comprehensive income (loss):							
Foreign currency translation	(27	5,038)	(485,604)		(553,583)		
Total other comprehensive income (loss)	(27	5,038)	(485,604)		(553,583)		
Comprehensive loss	\$	(13,877,558)	\$	(13,463,090)	\$	(19,280,309)	

See accompanying notes to consolidated financial statements. F-5

AMBER ROAD, INC. AND SUBSIDIARIES Consolidated Statements of Stockholders' Equity

			1			
	Common Stock ShareAmount	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity	
Balance at December 31, 2015	26,26 % ,459 26,261	\$ 181,457,089	\$ (783,209)	\$ (136,203,826)	\$ 44,496,315	
Net loss		_	_	(18,726,726)	(18,726,726)	
Other comprehensional loss	ve— —	_	(553,583)	_	(553,583)	
Exercise of stock options	646,6 89 7	1,886,935	_	_	1,887,582	
Common stock issued for vested restricted stock units	12,6642	(12)	_	_	_	
Stock-based compensation expense	n — —	5,467,890	_	_	5,467,890	
Common stock issued for contingent consideration	6,5066	(6)	_	_	_	
Balance at December 31, 2016	26,92 0 £, 98 6	188,811,896	(1,336,792)	(154,930,552)	32,571,478	
Net loss		_	_	(12,977,486)	(12,977,486)	
Other comprehensions	ve— —	_	(485,604)	_	(485,604)	
Exercise of stock options	107,5 26 8	313,587	_	_	313,695	
Common stock issued for vested restricted stock units	237,9 26 8	(238)	_	_	_	
Stock-based compensation expense	n— —	6,077,869	_	_	6,077,869	
Common stock issued for contingent consideration	17,27 5 7	(17)	_	_	_	
Balance at December 31, 2017	27,28 8,79,88 9	195,203,097	(1,822,396)	(167,908,038)	25,499,952	
Adoption of new accounting standard		_	_	5,007,810	5,007,810	
Net loss		_	_	(13,602,520)	(13,602,520)	

Oth con loss	nprehensiv	ve— —		_		(275,038)		_		(275,038)	
	ercise of ck options	200,7 20 1		871,984		_		_		872,185	
stor for rest	mmon ck issued vested cricted ck units	351,7 63 2		(352)		_		_		_	
con	ck-based npensation ense	n— —		12,275,16	66	_		_		12,275,166	
Dec	ance at cember 2018	27,84 \$,498	27,842	\$	208,349,895	\$	(2,097,434)	\$	(176,502,748)	\$	29,777,555

See accompanying notes to consolidated financial statements.

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AMBER ROAD, INC. AND SUBSIDIARIES Consolidated Statements of Cash Flows

Consolitated Statements of Cash Flows								
Year Ended De	cember 31,	****		2017				
2018		2017		2016				
Cash								
flows from								
operating								
activities:								
Net loss	(13,602,520)	\$	(12,977,486)	\$	(18,726,726)			
Adjustments								
to								
reconcile								
net								
loss to								
net								
cash								
provided								
by								
(used								
in)								
operating activities:								
Depreciation and,979,615		5,386,789		6,590,343				
amortization		3,360,769		0,390,343				
Bad								
de b 95,372		568,193		509,454				
expense		300,133		305,131				
		(077 060		5 467 000				
Stock-based 12,275,166 compensation		6,077,869		5,467,890				
Acquisition								
related				1,419,885				
deferred compensation								
Changes in								
fair								
value		10.525		20.460				
of —		18,525		30,469				
contingent								
consideration								
liability								
Accretion								
of 35,608 debt		37,884		62,914				
discount								
Changes in								
operating								
assets								
and								
liabilities:								
(577,960)		1,615,836		(1,213,717)				

Accounts receivable and unbilled receivables		
Prepaid expenses an(881,663) other assets	1,313,029	(1,437,777)
Accounts (193,706) payable	(166,898)	1,284,742
Accrued 2,055,400 expenses	(2,988,525)	4,228,119
Settlement of contingent accrued compensation related	(2,366,469)	_
to former ecVision founder		
Other 215,162 liabilities	(209,859)	(2,084,343)
Deferred (952,042) revenue	3,021,248	3,702,924
Net cash provided by 3,548,432 (used in) operating activities	(669,864)	(165,823)
Cash flows from investing activities:		
Capital 945) expenditures Addition of	(257,893)	(231,979)
capitalized software development costs	(1,458,495)	(2,286,778)
Addition ofintangible assets	_	(275,000)
Cash paid for (119,036) deposits	(190,752)	(118,993)
(3,553,877)	(1,907,140)	(2,912,750)

Net		
cash		
used		
in		
investing		
activities		
Cash		
flows		
from		
financing		
activities:		
Proceeds		
from		
revolving line 3,850,000	24,350,000	20,250,000
of		
credit		
Payments		
on		
	(24.250.000)	(10.670.555)
revolving line (23,850,000)	(24,350,000)	(19,250,000)
of		
credit		
Payments		
on (750,000) term	(656,250)	(375,000)
loan		
Debt		
fin(arte;ing6)	(35,701)	_
costs		
Repayments		
on		
capita197,865)	(1,556,097)	(1,425,882)
lease		
obligations		
Proceeds		
from		
the		
ex &72 \$ \$ 85	313,695	1,887,582
of		
stock options		
Contingent		
consideration related		
to	(1,308,525)	_
ecVision		
acquisition		
Net		
cash		
provided		
by (1,445,836) (used	(3,242,878)	1,086,700
	(3,2 72,070)	1,000,700
in)		
financing		
activities		
Eff(394,601)	(227,391)	(567,611)
of		

exchange

rate on cash,					
cash equivalents and					
restricted cash					
Net					
decrease					
in cash,					
ca(h,845,882)		(6,047,273)		(2,559,484)	
equivalents and					
restricted					
cash					
Cash, cash					
equivalents					
and restricted 9,417,001		15 464 054		10.000.750	
casn		15,464,274		18,023,758	
at beginning					
of					
period Cook					
Cash, cash					
equivalents					
and restricted	7.571.110	Φ.	0.415.001	Φ.	15 464 054
cash	7,571,119	\$	9,417,001	\$	15,464,274
at end					
of					
period					
Reconciliation of equivalents and the consolidated	restricted cash to				
Cash					
and cash	7,514,719	\$	9,360,601	\$	15,408,133
equivalents					
Restricted cash					
in de ∱6ș#t 90		56,400		56,141	
and					
other assets					
Total					
cash, cash					
eq \$ ivalents	7,571,119	\$	9,417,001	\$	15,464,274
and restricted					
cash					

834,432

790,338

Supplemental disclosures

of

cash

flow information:

Cash

paid for 1,236,178 \$ 938,949 \$

interest Non-cash

property and

equipment 1,45,082 acquired 1,936,990

under capital lease Non-cas

Non-cash property and

equipment 136,623 purchases — 22,454

purchase in accounts payable

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

(1) Background

Amber Road, Inc. (we, our or us) is a leading provider of a cloud-based global trade management solutions, including modules for logistics contract and rate management, supply chain visibility and event management, international trade compliance, Global Knowledge trade content database, supply chain collaboration with overseas factories and vendors, and duty management solutions to importers and exporters, nonvessel owning common carriers (resellers), and ocean carriers. Our solutions are primarily delivered using an on-demand, cloud-based, delivery model. We are incorporated in the state of Delaware and our corporate headquarters are located in East Rutherford, New Jersey. We also have offices in McLean, Virginia; Raleigh, North Carolina; Munich, Germany; Bangalore, India; Shenzhen and Shanghai, China; and Hong Kong.

(2) Summary of Significant Accounting Policies and Practices

Basis of Presentation and Principles of Consolidation

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and include our accounts and those of our wholly owned subsidiaries primarily located in India, China and Europe. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Significant items subject to such estimates and assumptions include the carrying amount of intangibles and goodwill; valuation allowance for receivables and deferred income taxes; revenue; capitalization of software costs; and valuation of share-based payments. Actual results could differ from those estimates.

Foreign Currency

The assets and liabilities of our foreign operations are translated into U.S. dollars at current exchange rates as of the balance sheet date, and revenues and expenses are translated at average exchange rates for the period. Resulting translation adjustments are reflected in accumulated other comprehensive loss, which is a separate component of stockholders' equity. Transaction gains and losses included in the consolidated statement of operations for the years ended December 31, 2018, 2017, and 2016 were not material.

Cash and Cash Equivalents

We consider all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents at December 31, 2018 and December 31, 2017 consist of the following:

	Dec	ember 31,		
	201	8	2017	
Cash	\$	7,471,075	\$	9,318,074
Money market accounts	43	,644	42,527	
	\$	7.514.719	\$	9.360.601

Fair Value of Financial Instruments and Fair Value Measurements

Our financial instruments consist of cash equivalents, accounts receivable, accounts payable, and accrued expenses. Management believes that the carrying values of these instruments are representative of their fair value due to the relatively short-term nature of those instruments.

Our estimate of fair value for financial assets and financial liabilities is based on the framework established in the fair value accounting guidance. The framework is based on the inputs used in valuation, gives the highest priority to quoted prices in active markets and requires that observable inputs be used in the valuations when available. Management determines fair value using the following hierarchy:

Level 1 — Quoted prices in active markets for identical assets or liabilities;

Level 2 — Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; or

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following table provides the financial assets and liabilities classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices.

Notes to Consolidated Financial Statements

December 31, 2018 2017 Assets: Cash equivalents -43,644 \$ 42,527 money market accounts Restricted cash - money 56,400 56,400 market

accounts

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is our best estimate of the amount of probable credit losses in our existing accounts receivable. We determine the allowance based on historical write-off experience, the industry, and the economy. We review our allowance for doubtful accounts monthly. Past-due balances over 90 days and over a specified amount are reviewed individually for collectibility. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. We do not have any off-balance-sheet credit exposure related to our customers. Typically, we record unbilled receivables for contracts on which revenue has been recognized, but for which the customer has not yet been billed.

The table below presents the changes in the allowance for doubtful accounts:

	Year Ended December 31,					
	2018	1	2017		2016	
Beginning balance	\$	530,895	\$	410,560	\$	153,543
Provision for doubtful accounts	195	,372	568,193		509,454	
Write-offs, net of recoveries	(11	0,323)	(447,858)		(252,437)	
Ending balance	\$	615,944	\$	530,895	\$	410,560

Major Customers and Concentrations of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents and trade receivables. Our customer base is principally comprised of enterprise and mid-market companies within industries including Chemical/Pharmaceutical, High Technology/Electronics,

Industrial/Manufacturing, Logistics, Oil & Gas, and Retail/Apparel. We do not require collateral from our customers. As of December 31, 2018, and 2017, no single customer accounted for more than 10% of our accounts receivable. For the years ended December 31, 2018 and 2017, one customer accounted for 10.5% and 11.0%, respectively, of our total revenue. For the year ended December 31, 2016, no single customer accounted for more than 10% of our total revenue.

Prepaid Expense and Other Current Assets

Prepaid expenses and other current assets as of December 31, 2018 and 2017 primarily consist of annual prepaid license and maintenance fees related to our internal software licenses, and prepaid marketing fees.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Equipment acquired under capital leases is recorded at the present value of the minimum lease payments and subsequently depreciated based on its classification below.

Depreciation on property and equipment is calculated on the straight-line method over the estimated useful lives of the assets as follows:

Asset Classification	Estimated Useful Life			
Computers and equipment	3	-	5 years	
Software	3	_	5 years	
Furniture and fixtures	7 yea	ars		
Leasehold improvements	estin life o	rter of nated or the nining	useful	

Goodwill

Goodwill represents the excess of costs over the fair value of the assets of businesses acquired. Goodwill and intangible assets acquired in a purchase business combination and determined to have an indefinite useful life are not amortized, but

Notes to Consolidated Financial Statements

instead are tested for impairment at least annually in accordance with the provisions of Accounting Standards Codification (ASC) 350, Intangibles — Goodwill and OtheASC 350). To accomplish this, we are required to identify our reporting units and determine the carrying value of each reporting unit by assigning the assets and liabilities, including the existing goodwill and intangible assets, to those reporting units as of the annual impairment testing date. Management has determined that we operate in one reporting unit.

Management is required to determine the fair value of our reporting unit and compare it to the carrying amount of the reporting unit on the annual impairment testing date. To the extent the carrying amount of the reporting unit exceeds the fair value of the reporting unit, we would be required to perform the second step of the annual impairment test, as this is an indication that the reporting unit goodwill may be impaired. We performed our annual impairment test as of December 31, 2018, and the second step was not required as the fair value exceeded the carrying value.

Other Intangibles

Other intangibles, net of accumulated amortization, are primarily the result of the allocation of the purchase price related to businesses acquired. Each intangible asset acquired is being amortized on a basis consistent with the utilization of the assets over their estimated useful lives and is reviewed for impairment in accordance with ASC 350.

Impairment of Long-Lived Assets

In accordance with ASC 350, Long-Lived Assets, such as property and equipment and purchased intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, then an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. During the years ended December 31, 2018, 2017, and 2016, management believes that no revision of the remaining useful lives or write-down of long-lived assets is required.

Income Taxes

Income taxes are accounted for under the provisions of ASC Topic 740, Income Taxes (ASC 740). Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

We recognize the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Revenue from Contracts with Customers

Adoption of Accounting Standards Codification Topic 606

Effective January 1, 2018, we adopted the requirements of ASC Topic 606, Revenue from Contracts with Customers (ASC 606), and all the related amendments (the new revenue standard) using the modified retrospective method. We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of accumulated deficit as of the adoption date. The comparative information for 2017 and 2016 has not been restated and continues to be reported under the accounting standards in effect for that period.

The adoption of the new standard reduced revenue due to the loss of services revenue from professional services billings delivered as of December 31, 2017 for on-premise installations of our software. Under the previous standard, revenue from these billings were deferred and amortized ratably over the subscription term of the related contract. Under the new standard, billings for professional services related to on-premise software installations are being recognized as revenue as services are performed. As the professional services were delivered previous to December 31, 2017, the amount included in deferred revenue as of that date will not be recognized in 2018 and beyond. Revenue Recognition

We primarily generate revenue from the sale of subscriptions and subscription-related professional services. In instances involving subscriptions, revenue is generated under customer contracts with multiple elements, which are comprised of (1)

Notes to Consolidated Financial Statements

subscription fees that provide the customers with access to our on-demand application and content, unspecified solution and content upgrades, and customer support, (2) professional services associated with consulting services (primarily implementation services), and (3) transaction-related fees (including publishing services). Our initial customer contracts usually have contract terms from 3 years to 5 years in length. Typically, the customer does not take possession of the software nor does the customer have the right to take possession of the software supporting the on-demand application service. However, in certain instances, we have customers that take possession of the software whereby the application is installed on the customer's premises. Our subscription service arrangements typically may only be terminated for cause and do not contain refund provisions.

We determine revenue recognition through the following steps:

- •Identification of the contract, or contracts, with a customer
- •Identification of the performance obligations in the contract
- •Determination of the transaction price
- •Allocation of the transaction price to the performance obligations in the contract
- •Recognition of revenue when, or as, we satisfy a performance obligation

The subscription fees typically begin the first month following contract execution, whether or not we have completed the solution's implementation.

Subscription Revenue for Hosted and On-Premise Customers

Subscription revenue, which primarily consists of fees to provide customers access to our solution, is recognized ratably over contract terms beginning on the commencement date of each contract, which is the date our service is made available to customers. For contracts in which the customer takes possession of the software, we determined that the software license and related content updates are one performance obligation and accordingly, recognize the arrangement fee over the contract term. Typically, amounts that have been invoiced are recorded in accounts receivable and in deferred revenue or revenue, depending on whether the revenue recognition criteria have been met. Transaction-related revenue is recognized as the transactions occur.

Professional Services Revenue for Hosted Customers

Professional services revenue primarily consists of fees for deployment of our solution. The majority of professional services contracts are on a time and material basis. When these services are not combined with subscription revenue as a single unit of accounting, as discussed below, this revenue is recognized as the services are rendered for time and material contracts, and when the milestones are achieved and accepted by the customer for fixed price contracts.

Professional Services Revenue for On-Premise Customers

For customers that take possession of the software, billings for professional services will be recognized as revenue when services are performed, unlike under the previous standard where revenue from these billings was deferred and amortized ratably over the subscription term of the related contract. The adoption of ASC 606 will reduce revenue due to the loss of deferred services revenue from professional services billings delivered prior to December 31, 2017 for on-premise installations of our software. Deferred revenue associated with on-premise professional services at December 31, 2017 will not be amortized in 2018 and beyond.

Multiple Performance Obligations

Some of our contracts with customers contain multiple performance obligations that generally include subscription, professional services (primarily implementation) as well as transaction-related fees.

For contracts with customers, we account for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. We determine the standalone selling prices based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the solution sold, taking into account the modules included, term of the arrangement, and base transaction volume, customer demographics, and geographic locations. *Other Revenue Items*

Sales tax collected from customers and remitted to governmental authorities is accounted for on a net basis and, therefore, is not included in revenue and cost of revenue in the consolidated statements of operations. We classify customer reimbursements received for direct costs paid to third parties and related expenses as revenue, in accordance with ASC 606.

Notes to Consolidated Financial Statements

Costs to Obtain and Fulfill a Contract

We defer commission costs that are incremental and directly related to the acquisition of customer contracts. Commission costs are accrued and deferred upon execution of the sales contract by the customer. Payments to sales personnel are made shortly after the receipt of the related customer payment. Under ASC 606, deferred commissions are amortized over an estimated customer life of 6 years, which differs from the previous standard whereby deferred commissions were amortized over the initial customer contract term. We determined the period of amortization of deferred commissions under ASC 606 by taking into consideration our customer contracts, our technology and other factors. Our commission costs deferred and amortized in the period are as follows:

	Year Ended December 31,				
	2018	2017		2016	
Commission costs deferred	\$ 4,509,044	\$	3,855,517	\$	6,436,699
Commission costs amortized	4,176,008	5,188,472		4,744,353	

Financial Statement Impact of Adopting ASC 606

We adopted ASC 606 using the modified retrospective method. The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an adjustment to accumulated deficit as of the adoption date. As a result of applying the modified retrospective method to adopt the new revenue guidance, the following adjustments were made to the following balance sheet accounts as follows:

	As Reported	Adjustments			As Adjusted
	December 31, 2017	Subscription Revenue Professional Services Revenue	Cost to Obtain a Contract	January 1, 2018	
Deferred commissions current	s,\$ 4,400,015	\$ — \$ —	\$ (562,607)	\$ 3,837,408	
Deferred commissions non-current	s,6,734,326		2,211,294	8,945,620	
Deferred revenue, current	37,812,239	229,093(2,170,118)	_	35,871,214	
Deferred revenue, non-current	1,830,706	— (1,418,098)	_	412,608	
Accumulated deficit	d(167,908,038)	(229,09 3)588,216	1,648,687	(162,900,228)	

Impact of New Revenue Standard on Financial Statement Line Items

In accordance with the new revenue standard requirements, the disclosure of the impact of adoption on our consolidated balance sheet as of December 31, 2018 and our consolidated statement of operations for the year ended December 31, 2018 is as follows:

	Dece	ember 31, 2018				
	As Reported		Balance Without Adoption of ASC 606		Effect of Change Higher/(Lower)	
Balance Sheet	\$	4,023,473	\$	4,277,548	\$	(254,075)

Deferred commissions, current			
Deferred commissions, non-current	9,092,591	6,512,449	2,580,142
Deferred revenue, current	35,039,155	36,776,692	1,737,537
Deferred revenue, non-current	265,324	1,640,285	1,374,961
Accumulated deficit	(176,502,748)	(181,941,313)	5,438,565
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For the Year Ended December 31, 2018

	Decei	11001 31, 2016				
	As Reported		Balance Without Adoption of ASC 606		Effect of Change Higher/(Lower)	
Statement of Operations						
Subscription revenue	\$	62,636,891	\$	62,503,226	\$	133,665
Professional services revenue	22,5	29,162	22,909,452		(380,290)	
Sales and marketing	22,9	49,487	23,626,867		677,380	
Net loss	(13,	602,520)	(14,033,275)		430,755	

Deferred Revenue and Performance Obligations

Deferred revenue from subscriptions represents amounts collected from (or invoiced to) customers in advance of earning subscription revenue. Typically, we bill our annual subscription fees in advance of providing the service. Deferred revenue from professional services represents revenue for time and material contracts where the revenue is recognized when milestones are achieved and accepted by the customer for fixed price contracts.

	Decemb	er 31,			
	2018		2017		
Subscription revenue	\$	34,849,486	\$	35,247,750	
Professional services revenue	189,66	59	2,564,489		
Total current	35,039	9,155	37,812,239		
Noncurrent:					
Subscription revenue	265,32	24	412,608		
Professional services revenue			1,418,098		
Total noncurrent	265,32	24	1,830,706		
Total deferred revenue	\$	35,304,479	\$	39,642,945	

The amount of subscription revenue and professional services revenue recognized that was included in the beginning balance of deferred revenue is as follows:

	Year	Year Ended December 31,			
	2018		2017		
Subscription revenue	\$	36,666,119	\$	33,769,230	
Professional services revenue	569,	765	2,138,892		

As of December 31, 2018, \$130,911,857 of revenue is expected to be recognized from remaining performance obligations for subscription contracts and is expected to be recognized over the next 5.7 years. Remaining performance obligations for professional services contracts are recognized within one year or less.

Cost of Revenue

Cost of subscription revenue. Cost of subscription revenue consists primarily of personnel and related costs of our hosting, support, and content teams, including salaries, benefits, bonuses, payroll taxes, stock-based compensation and allocated overhead, as well as software license fees, hosting costs, Internet connectivity, and depreciation expenses directly related to delivering our solutions, as well as amortization of capitalized software development costs. Our cost of subscription revenue is generally expensed as the costs are incurred.

Cost of professional services revenue. Cost of professional services revenue consists primarily of personnel and related costs, including salaries, benefits, bonuses, payroll taxes, stock-based compensation, the costs of contracted third-party vendors, reimbursable expenses and allocated overhead. As our personnel are employed on a full-time basis, our cost of professional services is largely fixed in the short term, while our professional services revenue may fluctuate, leading to fluctuations in professional services gross profit. Cost of professional services revenue is generally expensed as costs are incurred.

Notes to Consolidated Financial Statements

Stock-Based Compensation

In accordance with the guidance for stock-based compensation, we measure all employee stock-based compensation awards using a fair value method and record the related expense in our consolidated statement of operations.

Segments

We have one operating segment. Our Chief Operating Decision Maker (CODM) is our Chief Executive Officer, who manages operations on a consolidated basis for purposes of allocating resources. When evaluating performance and allocating resources, the CODM reviews financial information presented on a consolidated basis.

Geographic Information

Disaggregation of Revenue

We sell our subscription contracts and related professional services to customers primarily in two geographical markets.

Revenue by geographic location based on the billing address of our customers is as follows:

	Year	Year Ended December 31,				
Country	2018		2017		2016	
United States	\$	64,136,564	\$	59,905,306	\$	57,586,112
International	21,0	29,489	19,170,804		15,575,078	
Total revenue	\$	85,166,053	\$	79,076,110	\$	73,161,190

No single country other than the United States had revenue greater than 10% of total revenue for the years ended December 31, 2018, 2017, and 2016.

Long-lived assets by geographic area is as follows:

	Decen	nber 31,		
Country	2018		2017	
United States	\$	9,310,108	\$	8,535,281
International	822,	700	834,823	
Total long-lived assets	\$	10,132,808	\$	9,370,104

Recent Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, which removes Step 2 of the goodwill impairment test. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This ASU is effective for interim and annual reporting periods beginning after December 15, 2019. We intend to early adopt this standard on January 1, 2019 and believe it will not have a material effect on our consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, Restricted Cash, which amends ASC 230, Statement of Cash Flows. This ASU requires that a statement of cash flows explain the change during the reporting period in the total of cash, cash equivalents, and restricted cash or restricted cash equivalents. We adopted this standard on January 1, 2018 using the retrospective transition approach.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments, which amends ASC 230, Statement of Cash Flows. This ASU provides guidance on the statement of cash flows presentation of certain transactions where diversity in practice exists. The adoption of this standard on January 1, 2018 did not have a material effect on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases. The standard requires lessees to recognize lease assets and lease liabilities on the balance sheet and requires expanded disclosures about leasing arrangements. We will adopt this standard on January 1, 2019 on a modified retrospective basis and will not restate comparative amounts. We will elect the practical expedients permitted under the transition guidance, which allows us to carryforward our historical lease classification, our assessment on whether a contract is or contains a lease, and our initial direct costs for any

leases that exist prior to adoption of the new standard. We will also elect to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of operations on a straight-line basis over the lease term. We believe the most significant changes will be related to F-14

Notes to Consolidated Financial Statements

the recognition of new right-of-use assets and lease liabilities on our balance sheet at their present value for our real estate operating leases. We currently estimate that we will record a right-to-use asset of approximately \$6,600,000 to \$6,800,000 and a lease liability of approximately \$8,100,000 to \$8,300,000 for operating leases on January 1, 2019.

(3) Property and Equipment

	December 2018	er 31,	2017	
Computer software and equipment	\$	15,674,596	\$	14,296,247
Software development costs	15,300	,893	13,980,872	
Furniture and fixtures	1,713,226		1,741,918	
Leasehold improvements	2,643,337		2,546,686	
Total property and equipment	35,332,052		32,565,723	
Less: accumulated depreciation and amortization	(25,19)	9,244)	(23,195,619)	
Total property and equipment, net	\$	10,132,808	\$	9,370,104

Depreciation and amortization expense for the years ended December 31, 2018, 2017, and 2016 were \$3,941,643, \$4,271,381, and \$5,068,786, respectively.

2017

Certain development costs of our software solution are capitalized in accordance with ASC Topic 350-40, Internal Use Software, which outlines the stages of computer software development and specifies when capitalization of costs is required. Projects that are determined to be in the development stage are capitalized and amortized over their useful lives of five years. Projects that are determined to be within the preliminary stage are expensed as incurred. Information related to capitalized software costs is as follows:

Year E	nded December 31	,			
2018		2017		2016	
Softwar co\$ts capitaliz	3,214,896	\$	1,458,495	\$	2,286,778
Softwar	e				
costs 1,800 amortiz (1)	,868 ed	2,143,0	039	1,970,150	1
	ed in cost of subscrip	L.			
		Decembe	er 31,		

2018

Capitalized

software

costs

not yet \$ 2,372,042 \$ 824,738

subject

to

amortization

(4) Accrued Expenses

December 31,

2018 2017 Accrued 3,648,837 1,980,218 bonus Accrued 2,466,219 1,901,132 commission Deferred rent 423,301 380,077 Accrued professional 935,881 712,345 fees Accrued taxes 745,105 805,555 Other accrued 1,289,823 1,810,155

expenses 1,20

Total \$ 9,509,166 \$ 7,589,482

Notes to Consolidated Financial Statements

(5) Goodwill and Other Intangibles

Other intangibles are comprised of the following:

Amortizatio Period	n			December 31,		****	-01-
Acquired _	0	d	5.205.600	ф	7.207. 600	2018	2017
technology	8 years	\$	5,397,600	\$	5,397,600		
Customer related - intangibles	15 years	3,960,200		3,960,200			
Trademarks and 5 - licenses	7 years	1,137,000		1,137,000			
Patents and other	2.3 years	28,130		41,741			
		10,522,930)	10,536,541			
Less: accumul amortization	ated					(6,569,348)	(5,536,656)
		\$	3,953,582	\$	4,999,885		

Amortization expense was \$1,037,972, \$1,115,408, and \$1,521,557 for the years ended December 31, 2018, 2017, and 2016, respectively.

The estimated future amortization expense of other intangibles as of December 31, 2018 is as follows:

2019	\$	1,031,203
2020	929,606	
2021	879,600	
2022	809,719	
2023	171,055	
2024 and thereafter	92,399	
	\$	3,913,582

The rollforward of goodwill is as follows:

The rollforwa	The rollforward of goodwill is as follow				
Balance at December 31, 2016	\$	43,907,017			
2017 activity	(138,748)				
Balance at December 31, 2017	43,768,269				
2018 activity	(36,327)				
Balance at December 31, 2018	\$	43,731,942			

(6) Income Taxes

Loss before income taxes and income tax expense is comprised of the following:

	Year Ended December 31,					
	201	8	2017		2016	
Loss before income taxes:						
Domestic	\$	(13,547,014)	\$	(10,156,858)	\$	(14,562,851)
Foreign	43	6,504	(2,211,853)		(3,568,153)	
	\$	(13,110,510)	\$	(12,368,711)	\$	(18,131,004)
Current provision:						
Federal	\$		\$		\$	_
State	59	,391	39,396		735	
Foreign	43	2,619	569,379		594,987	
	\$	492,010	\$	608,775	\$	595,722
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Notes to Consolidated Financial Statements

A reconciliation of the statutory U.S. federal tax rate to our effective rate is as follows:

	Year Ended December 31,		
	2018	2017	2016
Statutory U.S. federal tax rate (benefit)	(2%.0)	(35.0)	(35.0)
State income taxes, net of federal benefit	0.3	0.1	0.1
Foreign taxes	3.1	6.5	4.3
Stock-based compensation	(4.8)	(1.6)	(3.3)
Change in valuation allowance	21.8	(77.0)	37.5
Global intangible low-taxed income	0.5	_	_
Effect of tax reform	_	108.7	_
Non-deductible expenses and other	3.9	3.2	(0.3)
Effective tax rate	3.%	4.9%	3. %

Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been recognized in the financial statements or tax returns. A valuation allowance is provided for deferred tax assets if it is more likely than not that these items will not be realized. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. We recorded a valuation allowance in the amount of \$28,624,693 and \$25,347,108 as of December 31, 2018 and 2017, respectively, as management believes it is more likely than not that we will not realize our net deferred tax assets. The net change in the valuation allowance during the years ended December 31, 2018 and 2017 was \$3,277,585, and \$(8,865,020), respectively.

We have subsidiaries in India, the United Kingdom, Germany, Hong Kong and China. The India and Germany businesses are treated as branches for U.S. tax purposes. As such, all income attributable to the India and Germany branches are currently recognized in the U.S. The India and Germany branches also pay taxes locally in India and Germany. The foreign current taxes consist of taxes paid locally in the United Kingdom, Germany, and India. The state current taxes consist of taxes paid primarily for state taxes for a subsidiary. F-17

Notes to Consolidated Financial Statements

Deferred tax assets and liabilities are comprised of the following:

			-	_
	December 2018	er 31,	2017	
Deferred tax				
assets:				
Accrued bonuses	\$	372,246	\$	393,274
Accounts receivable reserve	148,16	56	72,147	
Deferred revenue	52,648	1	1,048,179	
Interest expense carryover	313,81	2	_	
Net operating loss carryforward	25,053,247		24,720,025	
Stock-based compensation	6,292,204		3,288,819	
Other	757,64	-7	268,281	
Deferred tax assets	\$	32,989,970	\$	29,790,725
Deferred tax liabilities:				
Deferred commissions	\$	(2,270,027)	\$	(2,171,927)
Intangibles	(493,5	80)	(635,723)	
Property and equipment	(1,584	,915)	(1,619,083)	
Other	(16,75	5)	(16,884)	
Deferred tax liabilities	(4,365	,277)	(4,443,617)	
Less: valuation allowance	(28,62	4,693)	(25,347,108)	
Total	\$	_	\$	_
Wa have a fadore	1 not or	anotina laga (NI	OI) correctory	and of \$01.16

We have a federal net operating loss (NOL) carryforward of \$91,166,826 and \$88,442,842 as of December 31, 2018 and 2017, respectively. The federal NOL carryforward will begin to expire in 2019. These NOLs may be subject to limitation under Internal Revenue Code Section 382 should there be a greater than 50% ownership change as determined under the regulations.

Under IRC section 382 of the Internal Revenue Code substantial changes in ownership may limit the amount of NOL carryforwards that may be utilized annually in the future to offset taxable income. We have completed an Internal Revenue Code section 382 study through June 30, 3016, which concluded that we have experienced several ownership changes, causing limitations on the annual use of the NOL carryforwards. Provided there is sufficient taxable income, \$2,131,290 of the NOL carry forwards are expected to expire without utilization. Additionally, our ability to use our

NOL carryforwards to reduce future taxable income may be further limited as a result of any future equity transactions, including, but not limited to, an issuance of shares of stock or sales of common stock by our existing stockholders.

For state income tax purposes, we have NOL carryforwards in a number of jurisdictions in varying amounts and with varying expiration dates from 2019 through 2038.

Tax benefits of uncertain tax positions are recognized only if it is more likely than not that we will be able to sustain a position taken on an income tax return. We have no liability for uncertain positions. Interest and penalties, if any, related to unrecognized tax benefits, would be recognized as income tax expense.

We file income tax returns in the U.S. federal jurisdiction and various state jurisdictions. Tax years 2015 and forward remain open for examination for federal tax purposes and tax years 2014 and forward remain open for examination for our more significant state tax jurisdictions. To the extent utilized in future years' tax returns, NOL carryforwards at December 31, 2018 will remain subject to examination until the respective tax year is closed.

On December 22, 2017, H.R. 1 (also, known as the Tax Cuts and Jobs Act (the Act)) was signed into law. Among its numerous changes to the Internal Revenue Code, the Act reduces U.S. federal corporate tax rate from 35% to 21%. As a result, we believe that the most significant impact on our consolidated financial statements was the reduction of approximately \$13,400,000 for the deferred tax assets related to NOLs and other deferred tax assets as of December 31, 2018. Such reduction was offset by an equal reduction to our valuation allowance as of December 31, 2017. Additionally, we have full ownership of various foreign subsidiaries. At December 31, 2017 and November 2, 2017, the cumulative earnings and profits of these entities combined were negative. The Act also introduced a tax on global intangible low-taxed income (GILTI), which had no impact on the 2018 year. F-18

Notes to Consolidated Financial Statements

We have completed the accounting for the tax impact of the Act as of December 31, 2018 and have recorded no provisional amounts.

(7) Leases

We have several noncancelable operating leases that expire through 2024. These leases generally contain renewal options for periods ranging from three to five years and require us to pay all executory costs such as maintenance and insurance. Rental expense for operating leases for the years ended December 31, 2018, 2017, and 2016 was \$3,411,000, \$3,687,000, and \$3,697,000 respectively, and is allocated to various line items in the consolidated statements of operations.

The carrying value of assets recorded under capital leases was \$2,369,552 and \$2,691,383 as of December 31, 2018 and December 31, 2017, respectively, which includes accumulated amortization of \$7,238,896 and \$6,864,443, respectively. Amortization of assets held under capital leases is allocated to various line items in the consolidated statements of operations.

Future minimum lease payments under noncancelable operating leases (with initial or remaining lease terms in excess of one year) and future minimum capital lease payments as of December 31, 2018 are as follows:

	Capital Leases		Operating Leases	
2019	\$	1,431,296	\$	4,296,528
2020	719,074		2,663,588	
2021	427,967		1,450,505	
2022	153,798		906,176	
2023			461,453	
2024 and thereafter	_		157,021	
Total minimum lease payments	2,732,135		\$	9,935,271
Less amount representing interest	(271,361)			
Present value of net minimum capital lease payments	2,460,774			
Less current installments of obligations under capital leases	(1,263,375)			
Obligations under capital leases excluding current installments	\$	1,197,399		

(8) Debt

In March 2015, we entered into a credit agreement (the Credit Agreement) providing for financing comprised of (i) a senior secured term loan facility (the Term Loan) of \$20,000,000, and (ii) a senior secured revolving credit facility (the Revolver) that was subsequently amended to a borrowing limit of \$15,000,000, and includes a \$2,000,000 sublimit for the issuance of letters of credit. The Credit Agreement contains customary affirmative and negative covenants for financings of its type that are subject to customary exceptions. As of December 31, 2018, we were in compliance with all the reporting and financial covenants. In February 2017, the maturity date for both the Term Loan and the Revolver was extended to December 31, 2019. On December 26, 2018, we negotiated to extend the maturity date for both the Term Loan and the Revolver to December 31, 2021.

The outstanding balance for the Term Loan as of December 31, 2018 was \$12,769,235, net of unaccreted discount and deferred financing costs of \$105,765, and the outstanding balance under the Revolver was \$6,000,000. For the year ended December 31, 2018, the weighted average interest rate was 5.44% for the Term Loan and 6.16% for the Revolver.

The following table reflects the schedule of principal payments for the Term Loan as of December 31, 2018:

	-	
	Principal Payments	
2019	\$	750,000
2020	750,000	
2021	11,375,000	
	\$	12,875,000

Notes to Consolidated Financial Statements

(9) Stockholders' Equity

Common Stock

In accordance with our Certificate of Incorporation, as amended and restated, we are authorized to issue 100,000,000 shares of \$0.001 par value common stock. Each outstanding share of common stock entitles the holder to one vote. The holders of common stock are entitled to receive dividends, subject to preferential rights by holders of our preferred stock and if declared by our board of directors. As of December 31, 2018, no dividends have been declared. *Preferred Stock*

In accordance with our Certificate of Incorporation, as amended and restated, we are authorized to issue 10,000,000 shares of \$0.001 par value preferred stock, which may be issued in one or more series. At December 31, 2018, there are no shares of preferred stock issued.

(10) Stock-Based Compensation

We grant stock-based incentive awards to attract, motivate and retain qualified employees (including officers), non-employee directors and consultants, and those of our affiliates. Awards granted under our 2012 Omnibus Incentive Compensation Plan (the 2012 Plan) include common stock options, restricted stock units (RSUs), performance-based restricted stock units (PSUs), and restricted stock awards. The 2002 Stock Option Plan (the 2002 Plan) expired in 2012 and we are no longer making grants under it. Information related to the 2012 Plan and the 2002 Plan as of December 31, 2018 is as follows:

	2012 Plan	2002 Plan	
Shares of			
common			
stock	9,646,696	4,939,270	
authorized			
for issuance			
Stock options	4,244,630	202,555	
outstanding	4,244,030	202,333	
RSUs	1,189,899		
outstanding	1,109,099	_	
PSUs	240 440		
outstanding	248,440		
Shares			
available for	2,678,243	_	
future grant			

Stock Options

The fair value of option grants is estimated using the Black-Scholes option pricing model with the following weighted average assumptions:

	Year Ended December 31,			
	2018	2017	2016	
Risk-free interest rate	2.719	% 1.92%	1.29%	
Expected volatility	31.22	%32.66%	33.37%	
Expected dividend yield		_		
	6.25	6.25	6.25	

Expected life in years Weighted

average

fair value \$3.63 \$2.82 \$1.32

of options granted

The computation of expected volatility for each period is based on historical volatility of comparable public companies. The volatility percentage represents the mean volatility of these companies. The computation of expected life for each period was determined based on the simplified method. The risk-free interest rate is based on U.S. Treasury yields for zero-coupon bonds with a term consistent with the expected life of the options. The estimated forfeiture rate used in calculating compensation expense for options outstanding was 7.42% at December 31, 2018.

Notes to Consolidated Financial Statements

Information relative to the 2002 Plan and the 2012 Plan related to options is as follows:

	Options Outstanding	Weighted Average Exercise Price
Balance at December 31, 2015	4,402,943	\$9.38
Granted	248,728	3.74
Exercised	(646,639)	2.92
Canceled	(85,287)	9.04
Expired	(62,914)	5.77
Balance at December 31, 2016	3,856,831	9.99
Granted	1,050,654	7.86
Exercised	(107,526)	2.92
Canceled	(59,341)	9.94
Expired	(107,964)	11.11
Balance at December 31, 2017	4,632,654	9.79
Granted	195,150	9.88
Exercised	(200,750)	4.34
Canceled	(107,408)	7.50
Expired	(72,461)	13.00
Balance at December 31, 2018	4,447,185	10.04

	Decer 2018	mber 31,	2017	
Total intrinsic value of options exercised	\$	1,024,970	\$	415,374
Weighted average exercise price of fully vested options	\$	10.56	\$	10.43
Weighted average remaining term of fully vested options	5.8 <u>y</u>	years	6.4 ye	ars

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Total				
unrecognized				
compensation	\$	2,153,120	\$	5,116,640
cost related to	Ф	2,133,120	φ	3,110,040
non-vested				
stock options				
Weighted				
average period				
to recognize				
compensation	2.5	years	2.1 ye	ears
cost related to				
non-vested				
stock ontions				

Information with respect to the options outstanding and exercisable under the 2002 Plan and the 2012 Plan at December 31, 2018 is as follows:

Options Outstanding					Options 1	Exercisable	
Exercise Price Per Share	Options Outstanding	Weighted Average Remaining Contractual Life	Intrinsic Value	Options Exercisable	Weighted Average Contract Life	Remaining	Intrinsic Value
\$ 2.31 - \$ 3.74	349,100 years	\$ 1,857,113	288,148	4.3 years	\$	1,583,438	
	682,173 years	1,060,778	388,121	6.2 years	728,74	0	
8.07 - 12.62	1,460,754 years	123,570	907,504	6.5 years	108,74	4	
13.00 - 15.90	1,955,658 years	_	1,955,158	5.6 years	_		
	4,447,185	\$ 3,041,461	3,538,931		\$	2,420,922	

Notes to Consolidated Financial Statements

cost related to non-vested combined RSU/PSU

Restricted Stock Units and Performance Stock Units

Information relative to the 2012 Plan for RSUs and PSUs is as follows:

Number of RSU's Outstanding	Number of PSU's Outstanding	Total	Weighted Average Grant Date Fair Value	
Balance				
at Dec&th,\oldsymbol{\text{Def}}7 31, 2015	310,545	392,522	\$15.27	
Gran a66 ,018	_	666,018	3.91	
Vest@B,377)	_	(83,377)	8.11	
Can ¢6½,6 52)	(30,298)	(94,950)	5.44	
Balance				
at Dec 599 ,966 31, 2016	280,247	880,213	5.20	
Gran 502d ,580	198,440	792,020	8.29	
Vest(243,146)	_	(343,146)	3.84	
Can ¢3R ; d 38)	(12,188)	(50,326)	6.87	
Balance at				
Dec&thb,262 31, 2017	466,499	1,278,761	7.41	
Gran te8 ,351	50,000	758,351	9.65	
Vest(288,829)	_	(288,829)	6.66	
Can ¢∉lle,8 85)	(268,059)	(309,944)	8.16	
Balance at				
Decdn180;899 31, 2018	248,440	1,438,339	8.58	
			December 31, 2018	
Total unrecognized non-vested combin			\$8,884,054	
Weighted average J		2.6 years		

In 2017, we awarded 198,440 PSUs that entitle recipients to shares of our common stock if certain financial metrics are met for the fiscal year ending December 31, 2018. The PSUs entitle the recipients to an amount of shares of common stock that could range from 0% up to 500% of the number of units granted at the date of vesting depending on the level of achievement of the specified conditions. We expect that the financial metrics will be achieved and the

2.6 years

PSUs will vest at 500%.

(11) Net Loss Per Share

The following table sets forth the computation of basic and diluted net loss per share:

C	Year Ended December 31, 2018	2017		2016	
Numerator:					
Net loss	\$ (13,602,520)	\$	(12,977,486)	\$	(18,726,726)
Denominator:					
Weighted average shares used in computing net loss	27,825,795	27,415,953		26,718,882	
Basic and diluted net loss per share	\$ (0.49)	\$	(0.47)	\$	(0.70)

Diluted net loss per share does not include the effect of the following antidilutive common equivalent shares:

	Year End 2018	led December 31, 2017	2016
Stock options outstanding	4,447,1	8 5 ,632,654	3,856,831
Restricted stock and performance stock units	1,438,3	39,278,761	880,213
	5,885,5	52 5 ,911,415	4,737,044

Notes to Consolidated Financial Statements

(12) Commitments and Contingencies

Employment Agreements

On May 5, 2016, we entered into an employment agreement with our Chief Executive Officer and President, James W. Preuninger, which is identical to his previous employment agreement in all respects, with the following exceptions, (i) a term of employment through December 31, 2018 with successive two-year extensions unless either party provides written notice of non-renewal at least six months before the end of the then-current term of employment, (ii) a base salary adjustment to reflect a prior 2015 increase, (iii) inclusion of non-renewal by us as an event upon which specified compensation (including certain equity vesting) would be owed to Mr. Preuninger, similar to termination by us without cause or termination by Mr. Preuninger with good reason, (iv) new provisions addressing recoupment and claw-back, and (v) modification to the Confidential Information, Assignment of Rights, Non-Solicitation and Non-Competition Agreement between us and Mr. Preuninger (Exhibit B to the employment agreement) to increase the timeframe for non-solicitation and non-competition, upon expiration or termination, from twelve months to twenty-four months. At December 31, 2018, Mr. Preuninger's employment agreement was automatically renewed.

Legal Proceedings

We are involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our financial position, results of operations, or liquidity.

Other

Under the indemnification clauses of our standard customer agreements, we guarantee to defend and indemnify the customer against any claim based upon any failure to satisfy the warranty set forth in the contract associated with infringements of any patent, copyright, trade secret, or other intellectual property right. We do not expect to incur any infringement liability as a result of the customer indemnification clauses.

(13) Benefit Plan

We have a retirement savings plan under Section 401(k) of the Internal Revenue Code (the 401(k) Plan). We did not make any matching contributions to the 401(k) Plan during the years ended December 31, 2018, 2017, and 2016.

(14) Quarterly Results of Operations (unaudited)

The following is a summary of our quarterly results of operations for the years ended December 31, 2018 and 2017:

	March 31,	, ,	June 30,	•	September 30,		December 31,	
	2018 (1)		2018 (1)		2018		2018	
Revenues	\$	20,064,392	\$	21,056,355	\$	22,160,998	\$	21,884,308
Gross profit	10,412,725		11,270,420)	12,700,303		12,631,596	
Loss from operations	(3,992,726)	(3,683,398)	(1,836,609))	(1,883,950))
Net loss	(5,413,837)	(3,951,240)	(1,614,770))	(2,622,673))
Net loss per share—base and diluted	. \$(0.20)		\$(0.14)		\$(0.06)		\$(0.09)	
	March 31, 2017		June 30, 2017		September 30, 2017		December 31, 2017	
Revenues	\$	18,554,556	\$	19,675,285	\$	20,213,250	\$	20,633,019
Gross profit	9,152,782		9,765,196		11,062,248		11,354,317	
Loss from operations	(4,988,150)	(3,536,647)	(1,179,345))	(2,143,323))

Net loss	(4,413,196)	(4,517,471)	(2,237,703)	(1,809,116)
Net loss				
per share—ba	\$(0.16)	\$(0.16)	\$(0.08)	\$(0.07)
and dilute	d			

(1) During the third quarter of 2018, we revised previously reported stock-based compensation expense for the quarters ended March 31, 2018 and June 30, 2018 related to certain performance stock units due to a change in performance conditions. In accordance with Staff Accounting Bulletin (SAB) No. 99, Materiality, and SAB No. 108, Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements, management evaluated the materiality of the error from qualitative and quantitative perspectives, and concluded the error was immaterial to the prior periods. The correction of the immaterial error resulted in an increase of \$2,246,644 and \$747,119 to stock-based compensation for the three months ended March 31, 2018 and June 30, 2018, respectively.