

Upland Software, Inc.
Form 10-K
March 09, 2018

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

FORM 10-K

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

For the fiscal year ended December 31, 2017

OR

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

Commission File Number 001-36720

Upland Software, Inc.

(Exact name of registrant as specified in its charter)

Delaware 27-2992077

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

401 Congress Ave., Suite 1850

Austin, Texas 78701

(512) 960-1010

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

| Title of each class | Name of each exchange on which registered |
|---------------------|---|
|---------------------|---|

| | |
|--|--------------------------|
| Common Stock, par value \$0.0001 per share | The Nasdaq Global Market |
|--|--------------------------|

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

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer Accelerated filer x

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

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$222 million based upon the closing price of \$21.99 of such common stock on the Nasdaq Global Market on June 30, 2017 (the last business day of the registrant's most recently completed second fiscal quarter). Shares of common stock held as of June 30, 2017 by each director and executive officer of the registrant, as well as shares held by each holder of 10% of the common stock known to the registrant, have been excluded for purposes of the foregoing calculation.

This determination of affiliate status is not a conclusive determination for other purposes.

As of March 1, 2018, 20,768,401 shares of the registrant's Common Stock were outstanding.

Documents incorporated by reference:

Certain portions, as expressly described in this Annual Report on Form 10-K, of the registrant's Proxy Statement for the 2018 Annual Meeting of the Stockholders, to be filed not later than 120 days after the end of the year covered by this Annual Report, are incorporated by reference into Part III of this Annual Report where indicated.

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PART I

Special 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, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

Forward-looking statements generally relate to future events or our future financial or operating performance.

Forward-looking statements may be identified by the use of forward-looking words such as “anticipate,” “believe,” “may,” “will,” “continue,” “seek,” “estimate,” “intend,” “hope,” “predict,” “could,” “should,” “would,” “project,” “plan,” “expect” or the

plural of these words or similar expressions, although not all forward-looking statements contain these words. These forward-looking statements include, but are not limited to, statements concerning the following:

- our financial performance and our ability to achieve or sustain profitability or predict future results;
- our ability to attract and retain customers;
- our ability to deliver high-quality customer service;
- the growth of demand for enterprise work management applications;
- our plans regarding, and our ability to effectively manage, our growth;
- our plans regarding future acquisitions and our ability to consummate and integrate acquisitions;
- maintaining our senior management team and key personnel;
- our ability to maintain and expand our direct sales organization;
- the performance of our resellers;
- our ability to obtain financing in the future on acceptable terms or at all;
- our ability to adapt to changing market conditions and competition;
- our ability to successfully enter new markets and manage our international expansion;
- the operation and reliability of our third-party data centers;
- our ability to adapt to technological change and continue to innovate;
- economic and financial conditions;
- our ability to integrate our applications with other software applications;
- maintaining and expanding our relationships with third parties;
- costs associated with defending intellectual property infringement and other claims;
- our ability to maintain, protect and enhance our brand and intellectual property;
- our ability to comply with privacy laws and regulations;
- our expectations with respect to revenue, cost of revenue and operating expenses in future periods;
- our expectations with regard to trends, such as seasonality, which affect our business;
- our expectations as to the payment of dividends;
- our expectations with regard to revenue from perpetual licenses and professional services;
- our beliefs regarding the sufficient duration of our patents;
- our plans with respect to foreign currency exchange risk and inflation;
- our beliefs regarding how our applications benefit customers and what our competitive strengths are; and
- other risk factors included under “Risk Factors” in this Annual Report on Form 10-K.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Annual Report on Form 10-K primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations, and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties, and other factors, including those described in the section titled “Risk Factors” and elsewhere in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Annual Report on Form 10-K. We cannot assure you that the results, events, and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements made in this Annual Report on Form 10-K relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Annual Report on Form 10-K to reflect events or circumstances after the date of this Annual Report on Form 10-K or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make. All references to “Upland,” “we,” “us” or “our” mean Upland Software, Inc.

Item 1. Business

We provide cloud-based enterprise work management software. We define enterprise work management software as software that enables organizations to effectively plan, manage, and execute projects and work. Our software applications address enterprise work challenges in the following categories:

• **Project & Information Technology (IT) Management.** Enables users to manage their organization's projects, professional workforce, and IT costs.

• **Workflow Automation.** Enables users to streamline, optimize, automate, and secure document-intensive workflow business processes across their enterprise and supply chain.

• **Digital Engagement.** Enables users to more effectively engage with their customers, prospects, and community via the web and mobile technologies.

We sell our software applications primarily through a direct sales organization comprised of inside sales and field sales personnel. In addition to our direct sales organization, we have an indirect sales organization that sells to distributors and value-added resellers. We employ a land-and-expand go-to-market strategy. After we demonstrate the value of an initial application to a customer, our sales and account management teams work to expand the adoption of that initial application across the customer, and cross-sell additional applications to address other enterprise work management needs of the customer. Our customer success organization supports our direct sales efforts by managing the post-sale customer lifecycle.

Our subscription agreements are typically sold either on a per-seat basis or on a minimum contracted volume basis with overage fees billed in arrears, depending on the application being sold. Contract terms typically range from one to three years and are prepaid annually in advance. We service customers ranging from large global corporations and government agencies to small- and medium-sized businesses. We have more than 4,000 customers with over 450,000 users across a broad range of industries, including financial services, retail, technology, manufacturing, legal, education, consumer goods, media, telecommunications, government, non-profit, food and beverage, healthcare, and life sciences.

Through a series of acquisitions and integrations, we have established a diverse family of software applications under the Upland brand and in three product categories (Project & IT Management, Workflow Automation, and Digital Engagement), each of which addresses a specific enterprise work management need. For the twelve months ended December 31, 2017, compared to the twelve months ended December 31, 2016, our total revenue grew from \$74.8 million to \$98.0 million, representing a 31% period-over-period growth rate. For the twelve months ended December 31, 2017, compared to the twelve months ended December 31, 2016, our subscription and support revenue grew from \$65.6 million to \$85.5 million, representing a 30% period-over-period growth rate. See Note 13 Domestic and Foreign Operations, of the Notes to Consolidated Financial Statements for more information regarding our revenue as it relates to domestic and foreign operations.

Our operating results in a given period can fluctuate based on the mix of subscription and support, perpetual license, and professional services revenue. For the twelve months ended December 31, 2017 and 2016, our subscription and support revenue accounted for 87% and 88% of total revenue, respectively. Historically, we have sold certain of our applications under perpetual licenses, which also are paid in advance. For the twelve months ended December 31, 2017 and 2016, our perpetual license revenue accounted for 4% and 2% of total revenue, respectively. The support agreements related to our perpetual licenses are typically one-year in duration and entitle the customer to support and unspecified upgrades. The revenue related to such support agreements is included as part of our subscription and support revenue. Professional services revenue consists of fees related to implementation, data extraction, integration and configuration, and training on our applications. For the twelve months ended December 31, 2017 and 2016, our professional services revenue accounted for 9% and 10% of total revenue, respectively.

To support continued growth, we intend to pursue acquisitions of complementary technologies, products and businesses. This will expand our product families, customer base, and market access, resulting in increased benefits of scale. We will prioritize acquisitions within our current core product categories, including Project & IT Management, Workflow Automation, and Digital Engagement. Consistent with our growth strategy, we have made a total of sixteen acquisitions in the six years ending December 31, 2017.

We completed our initial public offering in November 2014, and our common stock is listed on the Nasdaq Global Market under the symbol "UPLD."

Industry Background

The continued growth of an information-based economy driven by technological innovation and globalization is changing the business environment and the way work is done. These changes have given rise to a large and growing group of knowledge workers who operate in dynamic work settings as part of geographically dispersed and virtual teams. To be successful, these knowledge workers must quickly synthesize, analyze, and act on large amounts of information, and collaborate effectively at any time, from anywhere and on multiple devices.

Many organizations continue to utilize manual processes and traditional tools, such as paper-based procedures, spreadsheets, and email, as well as legacy on-premise enterprise systems, to manage knowledge work. The limitations of these processes and systems include siloed and disparate information, limited visibility and transparency, poor collaboration among teams, lost productivity, and misalignment of work efforts and overall business objectives. In addition, legacy on-premise enterprise systems can be expensive and time intensive to implement, inflexible and difficult to use, and costly to upgrade and maintain. Today, legacy processes and systems are being disrupted and replaced by cloud-based enterprise software that combines improved visibility, collaboration, and productivity with rapid speed-to-value, low total cost of ownership, and reduced financial risk.

The Upland Approach

Our family of cloud-based software applications deliver the functionality required to plan, manage, and execute projects and work. Our cloud-based enterprise software applications can increase work capacity and productivity by reducing manual processes and isolated silos of information, and by enhancing collaboration across organizations. Our applications allow our customers to effectively manage the rapid pace of change and complexity in today's work environment. Our customers currently use our applications in the following functional areas:

Information Technology. Information technology (IT) departments use our applications to manage a variety of IT activities and resources, such as projects and application portfolios. Our applications help information technology departments ensure they are delivering against the objectives of the business by helping them select and prioritize the right investments, gain greater control of resource demand and allocation, and track and report benefit realization. Our applications enable executives to gain better insight into IT spending to help prevent cost overruns and understand the nature of consumption. By enabling IT departments to make more informed decisions with real-time visibility across their complete portfolio, our applications empower them to shift from a cost center to a more strategic enterprise function.

Process Excellence and Operations. Process excellence, Lean Six Sigma, and similar functional groups within organizations use our applications to facilitate critical process improvement efforts. Our applications help provide high-level visibility and tracking of process excellence programs, automate processes, and streamline workflows, while improving process governance. Process improvement and similar business transformation initiatives continue to be key drivers of corporate performance, especially among large global corporations.

Finance. Finance departments use our applications as a cost allocation tool for the assessment and validation of proposed investments and initiatives of particular lines-of-business, for increased visibility and governance of capital expenditures and cost-cutting projects, and for a deeper understanding of actual resource utilization and costs. Our applications help improve collaboration between finance departments and particular lines of business, in addition to streamlining compliance and accounting workflows.

Professional Services. Professional services organizations, such as consulting or software development firms, employ our applications to streamline service delivery, and to optimize utilization of billable resources. In addition, service-oriented departments within organizations, such as customer service and support teams, utilize our applications to more effectively budget, plan, and track the provision of services, and to improve capacity planning and forecasting.

Marketing. Marketing teams employ our applications to enhance their overall marketing effectiveness.

We offer applications that help customers build their online and mobile brand presence, engage their target audiences, collaborate on the creation and publication of content, and gain increased control over marketing workflows, activities, and budgets. Our applications empower marketing and communications organizations to more effectively manage the influx of projects, information, processes, and systems necessary to meet today's modern marketing requirements.

Sales Operations. Sales operation teams employ our applications to reduce the time their salespeople spend searching for or writing content, enabling them to deliver quality proposals and improve win rates. With the ability to create and manage a branded, approved library, our customers maintain content integrity and compatibility, ease the burden of updates, simplify compliance, and control their messaging and design in the content their salespeople use for presentations, quotes and proposals.

We believe our applications benefit customers in the following ways:

Our applications enable our customers to more effectively align programs, initiatives, investments, and projects with overall business objectives, helping ensure the right work is done at the right time. This alignment drives increased productivity and optimizes the allocation and utilization of people, time and money within organizations.

Our applications help customers to more effectively manage projects and tasks by enabling real-time visibility, collaboration, structured workflows, and access to the right content and information. This provides teams of distributed workers with clarity into priorities and expectations as well as the tools to execute effectively, resulting in increased productivity, transparency, accountability, and the ability to respond rapidly to change.

Our applications collect and make available real-time data regarding the planning, management, and execution of projects and work processes across teams and business units, which enables a more complete view of teams, projects, and resources at anytime from anywhere.

Our applications provide analytics and reporting capabilities that transform disparate data in real-time into actionable intelligence, enabling users to make better informed business decisions. Our applications enable customers to conduct dynamic and sophisticated "what-if" and scenario analyses that can improve their ability to respond effectively to changing business conditions.

Customers can easily access our cloud-based applications with an Internet browser. Our applications do not require large up-front software expenditures or significant ongoing infrastructure or information technology support. In addition, our applications have a modern look and feel that helps provide a consistent user experience across our platform.

Our applications are highly configurable, which provides us with flexibility to meet the unique business requirements of individual customers. Our applications are also scalable and are able to support large deployments while maintaining required performance levels. We provide tools to help our customers manage the critical elements of application security, including authentication, authorization, and regulatory compliance.

Our Competitive Strengths

We believe the following competitive strengths are keys to our success:

Large, diversified customer base. Our customer base is highly diverse and spans a broad array of industries, including financial services, retail, technology, manufacturing, legal, education, consumer goods, media, telecommunications, government, non-profit, food and beverage, healthcare and life sciences. We service customers of varying size, ranging from large global corporations and government agencies to small- and medium-sized businesses. We have over 4,000 customers, with no customer accounting for more than 3% of our revenue.

Diversified family of software applications. We offer a family of cloud-based enterprise work management software applications that addresses a broad range of enterprise needs. We believe this benefits our customers as compared to many of our cloud-based competitors who offer only a single

point solution for a more limited and discrete need. Our current applications address the information technology, process excellence, finance, professional services, and marketing functions within organizations.

Recurring revenue model with high visibility. We believe we have an attractive operating model due to the recurring nature of our subscription revenue, which results in greater visibility and predictability of future revenue and enhances our ability to effectively manage our business. In addition, the cloud-based nature of our model accommodates significant additional business volume with limited incremental costs, providing us with opportunities to improve our operating margins.

Proven M&A capability. We have a proven ability to successfully identify, acquire and integrate complementary businesses to grow our company, as evidenced by the sixteen acquisitions we have completed since the beginning of 2012. We believe that our acquisition experience and strategy gives us a competitive advantage in identifying additional opportunities to expand our family of software applications to better serve our customers.

Experienced, proven management team. Our management team has significant operating experience and previously occupied key leadership roles at both private and public companies. In addition, our management's extensive knowledge of the industry and experience in building businesses has enabled us to quickly establish a leading position within the enterprise software market.

Cloud-based delivery. We deliver our software applications and functionality primarily through the cloud, with no hardware or software installation required by our customers. This delivery model allows us to provide reliable, cost-effective applications to our customers, add subscribers with minimal incremental expense and deploy new functionality and upgrades quickly and efficiently. We believe our cloud-based delivery model provides us with a competitive advantage over legacy processes and on-premise systems.

Commitment to customer success. We have a dedicated customer success organization whose mission is to drive adoption, value realization, retention, and loyalty across our customer base. Our focus on enabling our customers' success is a key reason our annual net dollar retention rate was 93% as of December 31, 2017. Our commitment to customer success has enabled us to expand our footprint within customer organizations and facilitate the ongoing adoption of our enterprise software applications. We utilize Net Promoter Score (NPS) methodology to track our progress and drive continuous improvement.

Our Strategy for Growth

We believe the key elements of our strategy for growth are as follows:

Increase sales to existing customers. We believe there is a significant opportunity to expand the adoption of our applications within existing customer organizations, particularly within divisions or departments that have not previously used our applications. We also intend to cross-sell additional applications to our existing customers, as very few of our customers currently use more than one of our applications. In addition, we intend to add new applications to our family of applications that will address additional functions within the enterprise spectrum. We believe these initiatives will significantly increase the value of our platform to our customers, further strengthen our competitive position, and drive increased adoption of multiple applications by our customers.

Add new customers. We maintain direct sales and marketing capabilities to further grow our customer base. We also maintain indirect sales channels through alliances with strategic partners that can leverage our applications with their complementary services and technologies. In addition, we continue to expand the range of integrations between our software and third-party applications and platforms, which we believe make our applications more attractive to a broader audience of potential customers.

Acquire complementary software businesses. We intend to pursue acquisitions of complementary technologies, products, and businesses to expand our product families and customer base, and to provide access to new markets and increased benefits of scale. Our dedicated and experienced corporate

development team continually monitors a pipeline of potential acquisition candidates, many of which are smaller in scale or address only limited enterprise challenges, which often operate outside the scope of some of our larger competitors. We believe that our acquisition experience and strategy gives us a competitive advantage in identifying additional opportunities to expand our family of cloud-based applications to better serve our customers. We intend to prioritize acquisitions within the product families we currently offer, including Project & IT Management, Workflow Automation and Digital Engagement.

Expand globally. We believe there is an opportunity to grow sales of our applications globally. In fiscal 2017, 2016, and 2015, approximately 18%, 16%, and 19%, respectively, of our revenue was derived from sales outside the United States. Over the next several years, we plan to continue to evaluate growth opportunities outside the United States through selective acquisitions, the hiring of additional sales personnel, and entering into strategic partnerships.

Improve and enhance applications. We intend to continue to invest in research and development and work closely with our customers to identify and improve new applications, features and functionalities that address customer requirements across the enterprise spectrum. We also intend to continue to expand the breadth of our applications with additional analytics, third-party integrations, and social and mobile capabilities to meet the evolving needs of today's knowledge workers.

Our Products

We provide a family of cloud-based enterprise software applications under the Upland brand. Our applications are easy-to-deploy, highly configurable, scalable, flexible, and secure. We provide applications in three product families: Project & IT Management, Workflow Automation, and Digital Engagement. Our Project & IT Management product family enables users to manage their projects, professional workforce, and IT costs. Our Workflow Automation product family enables users to streamline, optimize, automate, and secure document-intensive business processes across their enterprise and supply chain. Our Digital Engagement product family enables users to effectively engage with their customers, prospects, and community via the web and mobile technologies.

Project & IT Management

Project and Portfolio Management. Our program and portfolio management applications are used by our customers to gain high-level visibility across their organizations and improve their top-down and bottom-up governance of programs, initiatives, investments, and projects. Our customers use these capabilities to:

- gather, develop, and assess ideas and proposed investments;
- prioritize and select projects and investments according to business value and strategic fit;
- more effectively allocate resources in alignment with business objectives;
- respond quickly to change with real-time visibility into project status, and with the ability to evaluate the impact of potential changes; and
- gauge performance against strategic objectives, execution-level indicators, and financial metrics.

Our program and portfolio management applications are currently used within the information technology, finance and process excellence functions of customer organizations, and in the healthcare and education industries.

Professional Services Automation. Our professional services automation applications are used by customers to more effectively manage their project and service-based knowledge workers to better manage employee-related expenses and client billing while improving scheduling, utilization, and alignment of human capital. Our customers use these capabilities to:

- create resource capacity plans;
- align available skills, expertise and capacity with project requirements;
- more efficiently plan and schedule projects;

- track resource and expense allocation for specific projects, activity types or budget categories;
- analyze workforce performance;
- streamline timesheet review, approval, and reporting processes;
- manage time, travel, and entertainment expenses; and
- streamline project cost reporting, billing, and revenue recognition processes.

Our professional services automation applications are currently used within the information technology, marketing, finance, and professional services functions of customer organizations.

IT Financial Management. Our financial management application is used by our customers to gain visibility into the cost, quality, and value of services the information technology and finance functions deliver to organizations. This increased transparency helps our customers to improve alignment during planning and budgeting processes, and to validate proposed investments and initiatives of a particular line of business. Our customers use these capabilities to:

- quantify and understand the total cost of ownership of information technology applications and services;
- establish product and unit-costing metrics for benchmarking and/or chargeback;
- provide information technology and finance departments with the ability to chargeback business units for applications and services, including cloud services, based on metered consumption;
- provide business managers with insights into their consumption of information technology services to better utilize information technology services with business goals and objectives;
- leverage utilization and capacity metrics for “what-if” analysis and modeling;
- analyze fixed versus variable information technology-related costs to identify opportunities for savings; and
- support demand-based budgeting and forecasting processes.

Our financial management application is currently used within the information technology and finance functions of customer organizations.

Knowledge Management. Our knowledge management application is used by customers to increase IT help desk and customer service agent productivity, improving employee and customer experience with a centralized knowledge hub to create, maintain, and find relevant information quickly. The searchable knowledge base reduces the time spent searching for answers, minimizes training time, and decreases support costs. Our customers use these capabilities to:

- deliver excellent IT support and customer service experiences;
- improve organization productivity and lower internal support costs by enabling employees to find, create, and share company knowledge more intelligently;
- implement web and mobile self-service with accurate knowledge solutions to the most common issues experienced by users on more than 600 of the most widely used off-the-shelf software applications; and
- drive customer loyalty by instantly providing relevant information across support channels, including web, mobile, and chat. Our knowledge management application is suitable for virtually any industry, and is currently used within the IT help desk and customer service functions of customer organizations.

Workflow Automation

Secure, Enterprise-Class Document Capture and Fax Routing. Our secure document capture and fax application is used by our customers to enable secure document process automation through an all-in-one platform that accelerates paper and electronic document-intensive workflows and communications. Our customers use these capabilities to:

- empower organizations with one extensible, easy-to-use platform for both document capture (scanning) and fax;
- secure corporate communications and facilitate compliant communications for regulated employees;
- increase customer satisfaction and save time through automated processes, convert from paper to online with
- increased accessibility, allowing for better management of customer interactions and improve overall service response times;
- lower total costs by consolidating fax infrastructure through Fax over IP technology that enables least cost routing;
- reduce risk through highly-scalable, reliable infrastructure that seamlessly supports a wide range of use cases with both fail over and disaster recovery;
- streamline mission-critical document workflows such as, e-filing, scanning to document management systems (DMS),
- and managing communications for sensitive intellectual property, while maintaining high levels of document integrity and security; and
- protect sensitive data with the ability to set custom business rules, such as flagging sensitive keywords to prevent data loss or holding documents until authorized users can access them.

Our enterprise secure document capture and fax applications are currently used in legal, financial services and healthcare, and other document-intensive functions of customer organizations.

Cloud-based Document, Forms and Process Automation. Our powerful end-to-end cloud solution for documents and forms management and workflow automation is used by our customers to automate document-based workflows by capturing, storing and routing content, assigning work tasks and creating audit trails for operations such as healthcare records, loan processing, human resource procedures, and accounts receivable and payable processing. Our customers use these capabilities to:

- empower collaboration across the enterprise by providing a better way for employees, suppliers, freelance contractors, and partners to access, share, and update content from anywhere;
- streamline workflows by creating custom rules to process and route content for approval;
- automatically capture, index, classify, and organize enterprise content in a secure, central repository with document retention policies to meet business and compliance requirements;
- apply and enforce document retention policies to meet business and compliance requirements;
- transform traditional PDF forms into clickable, HTML-based forms to eliminate paper processes and streamline other tasks;
- boost productivity by intelligently connecting users to their organization's everyday line of business applications, eliminating the tedious process of searching and retrieving related content; and
- make better business decisions based on actionable insights and analytics.

Our workflow automation and enterprise content management applications are currently used within the information technology, finance, marketing, and process excellence functions of customer organizations.

RFP and Sales Proposal Automation. Customers use our proposal automation and content management applications to capture and store content, route proposal content for review and approval, automate creation of sales documents, and track content effectiveness. Our customers use these applications to:

- empower collaboration by enabling sales teams, product managers, and other subject matter experts to access, share, and update content from anywhere;
- streamline workflows by creating custom rules to process and route proposal content and documents for approval;
- capture, index, classify, and organize enterprise content in a secure, central repository with flexible view, edits, and approval permissions to meet business and compliance requirements; and

track project, content, and staff performance to improve business efficiencies.

Our proposal automation and content management applications are currently used within the sales, marketing, product, finance, legal, and process excellence functions of customers across a variety of industries, including financial services, technology, business and professional services, telecommunications, and healthcare.

Supply Chain Visibility and Collaboration. Our supply chain collaboration application provides our customers with a single source for supply-chain communication, providing a basis for multi-enterprise, multi-tier, end-to-end supply chain collaboration. Our customers use these capabilities to:

- acquire actionable business intelligence, collaboration, and execution for all aspects of supply chain operations;
- implement a seamless migration to pull-based replenishment resulting in reductions in stock-outs and expensive expediting costs, higher order fulfillment rates, and improved customer service levels; and
- enable a closed-loop manufacturing and supply chain management process, resulting in reductions in raw material, work-in-process, finished goods inventory, and inventory carrying costs.

Our supply chain visibility and collaboration application is currently used in industrial and diversified manufacturing, healthcare, aerospace and defense, energy, automotive, electronics, sporting goods, and consumer packaged goods organizations.

Digital Engagement

Website Management and Web Visitor Insights. Our website management and web visitor insights applications are used by customers to connect and communicate with their target markets to build brand relationships or drive a highly relevant customer experience. Additionally, our website management and visitor insights applications are used by enterprise marketers and media companies to create, maintain, and deliver websites that enhance and influence prospect and customer engagement. These applications empower non-technical staff to create, manage, publish, analyze, and refine content and social media assets without information technology intervention. Our customers use these capabilities to:

- streamline the process for creating and managing website content;
- deliver more relevant, personalized content to website visitors based on the tracking of individual visitor behavior;
- convert website visits to actionable sales leads; and
- integrate user-generated content, such as polls, surveys, blogs, ratings, and comments, into their websites.

Our Website Management and Web Visitor Insights applications are currently used within the marketing and sales functions of our customers.

Mobile Engagement. Our mobile engagement applications are used by customers to engage with their target markets to drive a particular outcome via their mobile devices while providing a timely and personalized customer experience. Additionally, our mobile engagement applications are used by government, non-profit organizations, healthcare, media, restaurant and retail companies to plan, execute, manage, and analyze personalized mobile messaging campaigns that deliver effective mobile campaigns at scale. Our customers use these capabilities to:

- engage target audiences with automated one-to-one or batch text message campaigns;
- reach the correct person at exactly the right moment through list segmentation and scheduling;
- provide timely alerts and reminders on important events based on user preferences;
- manage and analyze their database and all mobile communications from a central mobile CRM, keeping track of all users and actions;
- integrate mobile campaign data and results with other systems;
- communicate via multi-channel outreach through additional innovative mobile features such as Push Notifications, RCS and Mobile Wallet.

Our Mobile Engagement applications are currently used within the communications and marketing function of our customers.

Customer Service Knowledge Management. Our customer service knowledge management applications are used by customers to provide a centralized knowledge hub to power their customer contact channels, increasing productivity of customer contact agents and improves employee and customer experience. Additionally, our customer service knowledge management applications are used by large enterprise call centers and banking and financial services organizations, to deliver the right answer to the right person at the right time. Our customers use these capabilities to:

- provide every channel value by helping to ensure customers obtain fast, consistent answers;
- deliver great customer service through a great knowledge experience;
- enable agents by arming them with good knowledge;
- develop a knowledge strategy that addresses customer service challenges.

Our Customer Service Knowledge Management applications are currently used with the IT department, customer service, customer support, and knowledge management function of our customers.

Customers

We have more than 4,000 customers with over 450,000 users. Our customers operate in a wide variety of industries, including financial services, retail, technology, manufacturing, legal, education, consumer goods, media, telecommunications, government, non-profit, food and beverage, healthcare and life sciences, chemicals, and travel and hospitality. No customer represented more than 3% of our revenue for the year ended December 31, 2017.

Sales

We sell our software applications primarily through a direct sales organization comprised of inside sales and field sales personnel. In addition to our direct sales organization, we have an indirect sales organization that sells to distributors and value-added resellers. We employ a land-and-expand go-to-market strategy. After we demonstrate the value of an initial application to a customer, our sales and account management teams work to expand the adoption of that initial application across the customer organization, as well as cross-sell additional applications to address other enterprise needs of the customer.

Marketing

Our marketing activities are designed to build awareness of the Upland brand and the individual software applications we offer, generate thought leadership, and create demand, resulting in leads and opportunities for our sales organizations. We focus a significant portion of our marketing activities on our existing installed base of customers to drive expansion and cross-sell opportunities. Our marketing programs target decision makers and influencers who participate in a buying cycle, including the chief information officer, the chief marketing officer, the chief financial officer, the director of process excellence, and other key technology and business managers. Our principal marketing programs include:

- use of our website to provide information about us and our software applications, as well as educational opportunities for potential customers;
- field marketing events for customers and prospective customers;
- participation in, and sponsorship of, executive events, trade shows, and industry events;
- our online virtual user conferences;
- integrated digital marketing campaigns, including email, online advertising, blogs, and webinars;
- public relations, analyst relations, and social media initiatives; and
- sales representatives who respond to incoming leads to convert them into new sales opportunities.

Customer Success

Our customer success organization is structured to manage all aspects of our post-sale customer lifecycle. This organization consists of dedicated teams with a mission to drive adoption of our applications, value realization, retention, and loyalty across our customer base. Our customer success organization has four core functional areas with strategic focus on customer relationship management:

Customer Care. Our customer care team assists customers throughout their lifecycle with the Upland family of applications by making service offerings available to all customers as part of their standard customer agreements, including webinars, virtual user conferences, and online community engagement.

Professional Services. Our professional services team is responsible for coordinating all activities relating to the implementation, transition, and on-boarding of new customers and assisting new customers with the addition of new applications to their accounts. Typical professional services engagements vary in length from a few weeks to several months depending on the size and scope of the engagement and are in addition to services provided under our standard customer agreement and are fee-based. In addition, our project managers and consultants work closely with our customers to provide services that help customers maximize the utility of our applications.

- **Account Management.** We assign each customer an account team with a relationship manager who functions as the customer's single point of contact and advocate within Upland. Our account management teams are trained on all of our applications and work closely with the relationship manager to ensure that our customers receive high-quality consultative service.

Customer Support. We offer support from all of our office locations to help our customers maximize the return on their investment in our applications. We provide 24/7 customer support around the world through our online customer support portal. In addition, our customer support team manages and administers the Upland customer community forum and knowledge base repository.

Our customer success organization manages programs to reinforce the ongoing business value of our applications and promote the Upland "customer for life" program. These service offerings include:

- **Health Checks and Program Reviews:** Engages core users and business buyer sponsors to deliver a detailed scorecard and recommendation report.

- **Advisory and Retained Services:** Provides access to a specific customer success contact with priority scheduling and periodic checkpoints.

- **System Deployment and Adoption Analysis:** Analyzes system configuration and usage patterns, resulting in best practice recommendations on improving user adoption and compliance.

- **Consumption Review and Recommendations:** Delivers best practice recommendations for implementation strategy and a roadmap proposal for aligning the system with customers' evolving process maturity to increase application usage.

- **Premier Success Plans:** Provides a bundled services, support, and product experience offering with three tiers (standard, gold and platinum) designed to provide maximum customer value.

- **Executive Outreach:** Promotes open communication between the Upland leadership team, which is fully committed to making sure customers are delighted with their Upland experience, and customer executives.

Technology and Operations

Our cloud-based family of applications utilizes a multi-tenant architecture and our customers access our applications using a secure Internet connection through a standard web browser. Our applications are easy to deploy, highly configurable, scalable, flexible, and secure, and provide our customers with a modern and intuitive user experience. We utilize both public and private cloud technology to deliver services to our customers. The services are

hosted in Tier 3 data centers located in the United States and in other countries. The facilities are designed and operated by third parties that provide 24/7 security, biometric access controls, redundant networking, power and environmental systems, and monitoring. Upland Software designs and operates the infrastructure architecture with fully redundant subsystems, highly available (HA) configurations, and defense in depth security zones.

Our applications are built on highly available and modular architectures that balance customer workloads across multiple servers. This allows us to provide a flexible method for scaling customers without impacting other parts of the architectural environment while maintaining the high levels of uptime our customers require.

Our family of applications offers high levels of security through logical data segregation of each customer's data from the data of other customers and through limiting access to our platform to only those individuals authorized by our customers. In addition, sensitive customer data is encrypted "at rest" and "in transit" over secure connections to redundant storage in a secondary location.

We maintain a formal and comprehensive security program designed to help preserve the security and integrity of customer data, protect against security threats or data breaches, and prevent unauthorized access to data. We regulate and limit access to data, servers, and networks in our hosting facilities and perform periodic security audits conducted by a third party that include our overall environment, access security, penetration testing, and vulnerability scans.

In March 2017, we began consolidating our data centers into multiple Amazon Web Services (AWS) regions. As of March 1, 2018, we had migrated a majority of our eleven cloud-based products to AWS, and expect to migrate the remaining cloud-based applications by the end of 2018. We believe this transition will continue to improve operational efficiencies for our business, allowing us to better serve our customers and scale with them as their needs increase and change over time. We believe that by combining our capacity planning techniques with the elastic and on-demand nature of AWS, we will be equipped to support our forecasted growth, and more easily balance our customers' workloads, their future scalability needs, and the high levels of uptime required by their businesses.

Research and Development

We focus our research and development efforts on customer-driven innovation, third-party integrations, and continually enhancing the performance, reliability, security, usability, and scalability of our applications.

In addition to internal resources, we utilize partners, contractors, and offshore resources to improve efficiencies and our ability to deliver quality software. Our research and development expenses were \$15.8 million, \$14.9 million, \$15.8 million in fiscal years 2017, 2016, and 2015, respectively.

Competition

The overall markets we serve are rapidly evolving and subject to changing technology, shifting customer needs, and frequent introductions of new applications. The intensity and nature of our competition varies significantly across our range of enterprise applications. We face competition both from point solution providers, including legacy on-premise enterprise systems, and other cloud-based software vendors that may address one or more of the functional elements of our applications. In addition, we face competition from manual processes and traditional tools, such as paper-based procedures, spreadsheets, and email.

We believe the principal competitive factors in our market include the following:

- breadth and depth of application functionality;
- ease of deployment and use of applications;
- total cost of ownership;
- levels of customer support satisfaction;
- brand awareness and reputation;
- capability for configurability, integration, scalability, and reliability of applications;

ability to innovate and respond to customer needs rapidly; and
level of integration among applications and with other enterprise systems.

We believe that we compete favorably on these factors. Our ability to remain competitive will largely depend on the strength of our applications, the effectiveness of our sales and marketing efforts, the quality of our customer success organization, and our ability to acquire complementary technologies, products, and businesses to enhance the features and functionality of our applications.

Intellectual Property and Proprietary Rights

We rely on a combination of trademark, copyright, trade secret, and patent laws in the United States and other jurisdictions as well as confidentiality procedures and contractual provisions to protect our intellectual property.

Employees

As of December 31, 2017, we had 375 employees, with the majority of our employees located in the United States or Canada. None of our employees are covered by a collective bargaining agreement. We have never experienced a strike or similar work stoppage, and we consider our relations with our employees to be good.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceedings that we believe would, individually or taken together, have a material adverse effect on our business, operating results, financial condition, or cash flows.

Information about Segment and Geographic Revenue

We operate and manage our business as a single operating segment. See our consolidated financial statements for a discussion of revenues, operating loss, net loss, and total assets. Our revenues are principally generated in the United States, which accounted for 82%, 84%, and 81% of consolidated revenues for the years ended December 31, 2017, 2016, and 2015, respectively. Revenues from international business accounted for 18%, 16%, and 19% of consolidated revenues for the years ended December 31, 2017, 2016, and 2015, respectively. See Note 13 Domestic and Foreign Operations, of the Notes to Condensed Consolidated Financial Statements for more information regarding our revenue as it relates to domestic and foreign operations.

Available Information

We were incorporated in Delaware in 2010. Our principal executive offices are located at 401 Congress Avenue, Suite 1850, Austin, TX 78701. Our telephone number at that location is (833) 875-2631. Our website address is www.uplandsoftware.com. Information on our website is not part of this report and should not be relied upon in determining whether to make an investment decision. The inclusion of our website address in this report does not include or incorporate by reference into this report any information on our website.

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge through our website as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. The public may read and copy the materials we file with the SEC at the Office of Investor Education and Advocacy (previously referred to as "SEC Public Reference Rooms") at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Additionally, the SEC maintains an internet site that contains reports, proxy, information statements, and other information. The address of the SEC's website is www.sec.gov.

Item 1A. Risk Factors

Risks Related to Our Business

We have a limited operating history and may be unable to achieve or sustain profitability or accurately predict our future results.

We were formed in July 2010 and acquired our first business and commenced operations in September 2011. Prior to September 2011, our business activity was devoted to raising capital, building infrastructure, and reviewing potential acquisitions. As such, we have a very limited operating history of selling our products and professional services to third parties. Our limited operating history makes it difficult to evaluate our current business and future prospects and may increase the risk of your investment. We incurred net losses of \$18.7 million, \$13.5 million, and \$13.7 million in fiscal 2017, 2016, and 2015, respectively. As of December 31, 2017, we had an accumulated deficit of \$81.1 million. Our losses in prior periods and accumulated deficit reflect the investments we have made to date to grow our business. We expect to have significant operating expenses in the future to further support and grow our business, including expanding the range of integrations between our software and third-party applications and platform, expanding our direct and indirect sales capabilities, pursuing acquisitions of complementary businesses, investing in our data center infrastructure and in research and development, and increasing our international presence. As a result, we may be unable to achieve or sustain profitability or accurately predict our future results. You should not consider our recent growth in revenue as indicative of our future performance, and we cannot assure you that we will achieve profitability in the future, nor that if we do become profitable, we will sustain profitability.

Our growth depends on our ability to retain existing customers, secure additional subscriptions, and cross-sell opportunities from existing customers, while nonrenewals and downgrades could harm our future operating results. In order to improve our operating results, it is important that our customers renew or upgrade their agreements with us when the applicable contract term expires, and also purchase additional applications from us. Typically contract terms are one to three years for subscription agreements, and one year for perpetual license agreements. Upon expiration, customers can renew their existing subscriptions, upgrade their subscriptions to add more seats or additional minimum contracted volume, downgrade their subscriptions to fewer seats or lower minimum contracted volume, or not renew. A renewal constitutes renewing an existing contract for an application under the same terms, and an upgrade includes purchasing additional seats or volume under an existing contract. We may also cross-sell additional applications to existing customers. Our ability to grow revenue and achieve profitability depends, in part, on customer renewals, customer upgrades, and cross-sales to existing customers exceeding downgrades and non-renewals. However, we may not be able to increase our penetration within our existing customer base as anticipated, and we may not otherwise retain subscriptions from existing customers. Our customers may choose to not renew or upgrade their subscriptions, or may downgrade, because of several factors, including dissatisfaction with our prices, features or performance relative to competitive offerings, reductions in our customers' spending levels, unused seats or volume, or limited adoption or use of our applications. In addition, we may not be successful in cross-selling new applications to our existing customers. If our customers do not upgrade or renew their subscriptions or purchase additional applications from us, or if they downgrade their subscriptions, our revenue may grow more slowly than expected or may decline, and our financial performance may be adversely affected.

Any failure to offer high-quality customer service may adversely affect our relationships with our customers and our financial results.

Our customers depend on our customer success organization to manage the post-sale customer lifecycle, including to implement new applications for our customers, provide training and ongoing education services, and resolve technical issues relating to our applications. We may be unable to respond quickly enough to accommodate short-term increases in demand for our customer success services. We also may be unable to modify the format of our customer success services to compete with changes in similar services provided by our competitors. Increased customer demand for these services, without corresponding revenue, could increase costs and adversely affect our

operating results. In addition, our sales process is highly dependent on the reliable functional operation of our applications, our business reputation, and positive recommendations from our existing customers. Any failure to maintain high-quality customer service, or a market perception that we do not maintain high-quality customer service, could adversely affect our reputation, our ability to sell our applications to existing and prospective customers, and our business, operating results, and financial position.

If the market for cloud-based enterprise work management applications develops more slowly than we expect, or declines, our business could be adversely affected.

The market for cloud-based enterprise work management applications is not as mature as the market for legacy on-premise enterprise systems, and it is uncertain whether cloud-based applications will achieve and sustain high levels of customer demand and market acceptance. Our success will depend, to a substantial extent, on increased adoption of cloud-based applications, particularly our enterprise work management software applications. Many large organizations have invested substantial personnel and financial resources to integrate legacy on-premise enterprise systems into their businesses and, therefore, may be reluctant or unwilling to migrate to cloud-based applications, away from their traditional vendors or to new practices, because of the organizational changes often required to successfully implement new enterprise work management systems. In addition, we do not know whether the adoption of enterprise work management software will continue to grow and displace manual processes and traditional tools, such as paper-based procedures, spreadsheets, and email. It is difficult to predict customer adoption rates and demand for our applications, the future growth rate and size of the cloud-based software application market, or the entry of competitive products. The expansion of the cloud-based software application market depends on a number of factors, including the cost, performance, and perceived value associated with cloud-based applications, as well as the ability of cloud-based application companies to address security and privacy concerns. If other cloud-based software application providers experience security incidents, loss of customer data, disruptions in delivery, or other problems, the market for cloud-based applications as a whole, including our enterprise work management applications, may be negatively affected. If cloud-based applications do not achieve widespread adoption, or there is a reduction in demand for cloud-based applications caused by a lack of customer acceptance, technological challenges, weakening economic conditions, security or privacy concerns, competing technologies and products, and decreases in corporate spending or otherwise, our revenues may decrease, and our business could be adversely affected.

If we fail to manage our growth effectively, we may be unable to execute our business plan and maintain high levels of customer satisfaction.

We have recently experienced a period of rapid growth in our personnel and operations. In particular, we increased our number of full-time employees from three as of December 31, 2011 to 375 as of December 31, 2017, and have also increased the size of our customer base. In addition, our revenue grew from \$712,000 in fiscal 2011 to \$98.0 million in fiscal 2017. Acquisitions are a primary component of our growth strategy, and as a result, we anticipate that we will continue to experience further rapid growth in our personnel and operations in the future. Our growth has placed, and future growth will place, a significant strain on our managerial, administrative, operational, financial, and other resources. To manage the expected growth of our personnel and operations, we will need to continue to improve our operational, financial and management controls, and our reporting systems and procedures. Failure to effectively manage our growth could result in difficulty or delays in deploying our applications, declines in quality or customer satisfaction, increases in costs, and difficulties in introducing new features or other operational difficulties, and any of these difficulties could adversely impact our business performance and results of operations.

We have made, and expect to continue to make, acquisitions as a primary component of our growth strategy. We may not be able to identify suitable acquisition candidates or consummate acquisitions on acceptable terms, or we may be unable to successfully integrate acquisitions, which could disrupt our operations and adversely impact our business and operating results.

A primary component of our growth strategy has been to acquire complementary businesses to grow our company. For example, we acquired the businesses of PowerSteering Software, Inc., Tenrox Inc., and LMR Solutions, LLC dba EPM Live in fiscal 2012; the businesses of FileBound Solutions, Inc. and Marex Group Inc., ComSci, LLC, and Clickability Inc. in fiscal 2013; the businesses of Solution Q Inc. and Mobile Commons, Inc. in fiscal 2014; Ultriva Inc. in fiscal 2015; and the businesses of LeadLander, Inc., HipCricket, Inc., and Advanced

Processing and Imaging, Inc. in fiscal 2016. In fiscal 2017, we acquired the businesses of Omtool, Ltd., RightAnswers, Inc., Waterfall International, Inc., and Qvidian Corporation. We intend to continue to pursue acquisitions of complementary technologies, products, and businesses as a primary component of our growth strategy to enhance the features and functionality of our applications, expand our customer base, provide access to new markets, and increase benefits of scale. Acquisitions involve certain known and unknown risks that could cause our actual growth or operating results to differ from our expectations. For example:

- we may not be able to identify suitable acquisition candidates or to consummate acquisitions on acceptable terms;
- we may pursue international acquisitions, which inherently pose more risks than domestic acquisitions;
- we compete with others to acquire complementary products, technologies, and businesses, which may result in decreased availability of, or increased price for, suitable acquisition candidates;
- we may not be able to obtain the necessary financing, on favorable terms or at all, to finance any or all of our potential acquisitions;
- we may ultimately fail to consummate an acquisition even if we announce that we plan to acquire a technology, product, or business; and
- acquired technologies, products, or businesses may not perform as we expect, and we may fail to realize anticipated revenue and profits.

In addition, our acquisition strategy may divert management's attention away from our existing business, resulting in the loss of key customers or employees, and expose us to unanticipated problems or legal liabilities, including responsibility as a successor for undisclosed or contingent liabilities of acquired businesses or assets.

If we fail to conduct due diligence on our potential targets effectively, we may, for example, not identify problems at target companies or fail to recognize incompatibilities or other obstacles to successful integration. Our inability to successfully integrate future acquisitions could impede us from realizing all of the benefits of those acquisitions and could severely weaken our business operations. The integration process may disrupt our business and, if new technologies, products, or businesses are not implemented effectively, may preclude the realization of the full benefits expected by us and could harm our results or operations. In addition, the overall integration of new technologies, products, or businesses may result in unanticipated problems, expenses, liabilities, and competitive responses. The difficulties of integrating an acquisition include, among other things:

- issues in integrating the target company's technologies, products, or businesses with ours;
- incompatibility of marketing and administration methods;
- maintaining employee morale and retaining key employees;
- integrating the cultures of both companies;
- preserving important strategic customer relationships;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations; and
- coordinating and integrating geographically separate organizations.

In addition, even if the operations of an acquisition are integrated successfully, we may not realize the full benefits of the acquisition, including the synergies, cost savings, or growth opportunities that we expect. These benefits may not be achieved within the anticipated time frame, or at all.

Further, acquisitions may cause us to:

- issue common stock that would dilute our current stockholders' ownership percentage;
- use a substantial portion of our cash resources;
- increase our interest expense, leverage, and debt service requirements if we incur additional debt to pay for an acquisition;
- assume liabilities for which we do not have indemnification from the former owners; further, indemnification obligations may be subject to dispute or concerns regarding the creditworthiness of the former owners;

- record goodwill and non-amortizable intangible assets that are subject to impairment testing and potential impairment charges;
- experience volatility in earnings due to changes in contingent consideration related to acquisition earn-out liability estimates;
- incur amortization expenses related to certain intangible assets;
- lose existing or potential contracts as a result of conflict of interest issues;
- become subject to adverse tax consequences or deferred compensation charges;
- incur large and immediate write-offs; or
- become subject to litigation.

We depend on our senior management team and the loss of one or more key personnel, or an inability to attract and retain highly skilled personnel may impair our ability to grow our business.

Our success depends, in part, upon the continued services of our key executive officers, including John T. McDonald, Michael D. Hill, and Timothy W. Mattox, as well as other key personnel. We do not have employment agreements with most of our executive officers or other key personnel that require them to continue to work for us for any specified period; therefore, they may terminate employment with us at any time with no advance notice. The replacement of our senior management team or other key personnel likely would involve significant time and costs, and the loss of these employees may significantly delay or prevent the achievement of our business objectives.

We face intense competition for qualified individuals from numerous technology and software companies. If we fail to attract and retain suitably qualified individuals, including software engineers and sales personnel, our ability to implement our business plan and develop and maintain our applications could be adversely affected. As a result, our ability to compete would decrease, our operating results would suffer, and our revenue would decrease.

Failure to maintain and expand our sales organization may negatively impact our revenue growth.

We sell our applications primarily through a direct sales organization comprised of inside sales and field sales personnel. In addition, we have an indirect sales organization, which sells to distributors and value-added resellers. Growing sales to both new and existing customers is, in part, dependent on our ability to maintain and expand our sales force. Identifying, recruiting and training additional sales personnel requires significant time, expense, and attention. It can take several quarters or longer before our sales representatives are fully-trained and productive. Our business may be adversely affected if our efforts to expand and train our sales organization do not generate a corresponding increase in revenue. In particular, if we are unable to hire, develop, and retain sales personnel, or if our new sales personnel are unable to achieve expected sales productivity levels in a reasonable period of time or at all, our revenue may grow more slowly than expected or decline and our business may be harmed.

Because we generally recognize revenue from our customers over the terms of their agreements but incur most costs associated with generating such agreements in advance, rapid growth in our customer base may increase our losses in the short-term.

Expenses associated with acquiring customers, such as the expenses related to our sales organizations and related commissions, are generally expensed as incurred, while most of our revenue is recognized ratably over the life of the applicable agreements. Therefore, increased sales will result in our recognition of more costs than revenue during the early periods covered by such agreements, even in cases where the agreements are expected to be profitable for us over their full terms. As a result, even if we are successful in increasing our customer base, our short-term operating results may suffer.

We recognize revenue from customers over the term of the related agreement; therefore, downturns or upturns in our business may not be immediately reflected in our operating results.

We recognize revenue from customer agreements ratably over the terms of these agreements. As a result, a significant portion of the revenue we report in each quarter is generated from customer agreements entered into during previous periods, which is reflected as deferred revenue on our balance sheet. Consequently, a decline in new or renewed agreements, or a downgrade of renewed agreements to fewer seats or less minimum contracted volume, in any one quarter may not be fully reflected in our revenue in that quarter. Such a decline, however, will negatively affect our revenue in future quarters. Accordingly, the effect of significant downturns in sales and market acceptance

of our applications, and potential changes in our pricing policies or rates of renewals, may not be fully reflected in our results of operations until future periods. Similarly, it would be difficult for us to rapidly increase our revenue through new sales, renewals, and upgrades of existing customer agreements, or through additional cross-selling opportunities, in a given period due to the timing of revenue recognition inherent in our subscription model.

Perpetual license revenue is unpredictable, and a material increase or decrease in perpetual license revenue from period to period can produce substantial variation in the total revenue and earnings we recognize in a given period. Perpetual license revenue reflects the revenue recognized from sales of perpetual licenses relating to our workflow automation and enterprise content management applications to new customers and additional licenses for such applications to existing customers. We generally recognize the license fee portion of the arrangement in advance. Perpetual licenses of our workflow automation and enterprise content management applications are sold through third-party resellers, and as such, the timing of sales of perpetual licenses is difficult to predict with the timing of recognition of associated revenue unpredictable. A material increase or decrease in the sale of perpetual licenses from period to period could produce substantial variation in the revenue we recognize. Accordingly, comparing our perpetual license revenue on a period to period basis may not be a meaningful indicator of a trend or future results. Our quarterly operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of research analysts or investors, which could cause our stock price to decline, and you may lose part or all of your investment.

Our quarterly operating results may fluctuate as a result of a variety of factors, many of which are outside of our control. Accordingly, the results of any one quarter may not fully reflect the underlying performance of our business and should not be relied upon as an indication of future performance. If our quarterly operating results or outlook fall below the expectations of research analysts or investors, the price of our common stock could decline substantially. Fluctuations in our quarterly operating results or outlook may be due to a number of factors, including, but not limited to:

- the extent to which our existing customers purchase additional seats or volume for our applications, and the timing and terms of those purchases;
- the extent to which our existing customers renew their customer agreements for our applications and the timing and terms of those renewals;
- the extent to which we cross-sell additional applications to our existing customers and the timing and terms of such cross-selling;
- the addition or loss of customers, including through acquisitions or consolidations;
- the extent to which new customers are attracted to our applications to satisfy their enterprise work management needs;
- the rate of adoption and market acceptance of enterprise work management applications;
- the mix of our revenue, particularly between product and professional services revenue, for which the timing of revenue recognition is substantially different;
- changes in the gross profit we realize on our applications and professional services due to our differing revenue recognition policies applicable to subscription, product, and professional services revenue and other variables;
- the extent to which we enter into multi-year contracts, in which the support fees are typically paid in advance;
- the number and size of new customers and the number and size of renewals in a particular period;
- changes in our pricing policies or those of our competitors;
- the mix of applications sold during a period;
- the timing and expenses related to the acquisition of technologies, products, or businesses, and potential future charges for impairment of goodwill from such acquisitions;

the amount and timing of operating expenses, including those related to the maintenance and expansion of our business, operations and infrastructure;

the amount and timing of expenses related to the development of new products and technologies, including enhancements to our applications;

the amount and timing of commissions earned by our sales personnel;

the timing and success of new applications introduced by us or new offerings offered by our competitors;

the length of our sales cycles;

changes in the competitive dynamics of our industry, including consolidation among competitors, customers, or strategic collaborators;

our ability to manage our existing business and future growth, including increases in the number of customers using our applications;

the seasonality of our business or cyclical fluctuations in our industry;

the timing and expenses related to any international expansion efforts we may undertake and the success of such efforts;

various factors related to disruptions in access and delivery of our cloud-based applications, errors or defects in our applications, privacy and data security, and exchange rate fluctuations, each of which is described elsewhere in these risk factors; and

general economic, industry, and market conditions.

We may need financing in the future, and any additional financing may result in restrictions on our operations or substantial dilution to our stockholders. We may seek to renegotiate or refinance our loan facility, and we may be unable to do so on acceptable terms or at all.

We have funded our operations since inception primarily through equity financings, cash from operations, and cash available under our loan facility. We may need to raise funds in the future, for example, to expand our business, acquire complementary businesses, develop new technologies, respond to competitive pressures, or react to unanticipated situations. We may try to raise additional funds through public or private financings, strategic relationships, or other arrangements. Our ability to obtain debt or equity funding will depend on a number of factors, including market conditions, our operating performance, and investor interest. Additional funding may not be available to us on acceptable terms or at all. If adequate funds are not available, we may be required to reduce expenditures, including curtailing our growth strategies, reducing our product-development efforts, or foregoing acquisitions. If we succeed in raising additional funds through the issuance of equity or convertible securities, it could result in substantial dilution to existing stockholders. If we raise additional funds through the issuance of debt securities or preferred stock, these new securities would have rights, preferences, and privileges senior to those of the holders of our common stock. In addition, any debt financing obtained by us in the future or issuance of preferred stock 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. Additionally, we may need to renegotiate the terms of our loan facility, and our lender may be unwilling to do so, or may agree to such changes subject to additional restrictive covenants on our operations and ability to raise capital.

Our loan facility contains operating and financial covenants that may restrict our business and financing activities. On August 2, 2017, we expanded into a \$200.0 million loan facility with Wells Fargo Capital Finance. The facility is comprised of a \$95.0 million term loan, a \$10.0 million revolving credit facility and a \$40.0 million delayed draw term loan for acquisitions, of which \$20.0 million was drawn in November 2017. Additionally, the facility provides for an uncommitted \$55.0 million accordion loan to further support future acquisitions and an allowance of \$20.0 million of subordinated seller notes for acquisitions.

Our obligations and the obligations of the co-borrowers and any guarantors under the Wells Fargo loan facility are secured by a security interest in substantially all of our assets and assets of the co-borrowers' and of any guarantors, including intellectual property. The terms of the credit facility limits, among other things, our ability to

- sell, lease, license or otherwise dispose of assets;
- undergo a change in control;
- consolidate or merge with or into other entities;
- make or own loans, investments and acquisitions;
- create, incur or assume guarantees in respect of obligations of other persons;
- create, incur or assume liens and other encumbrances; or
- pay dividends or make distributions on, or purchase or redeem, our capital stock.

Furthermore, the Wells Fargo loan facility requires us and our subsidiaries to comply with certain financial covenants. The operating and other restrictions and covenants in the loan facility, and in any future financing arrangements that we may enter into, may restrict our ability to finance our operations, engage in certain business activities, or expand or fully pursue our business strategies, or otherwise limit our discretion to manage our business. Our ability to comply with these restrictions and covenants may be affected by events beyond our control, and we may not be able to meet those restrictions and covenants. A breach of any of the restrictions and covenants could result in a default under the loan facility or any future financing arrangements, which could cause any outstanding indebtedness under the loan facility or under any future financing arrangements to become immediately due and payable, and result in the termination of commitments to extend further credit.

If we are unable to increase market awareness of our company and our applications, our revenue may not continue to grow, or may decline.

Market awareness of our company and our applications is essential to our ability to generate new leads for expanding our business and our continued growth. If we fail to sufficiently invest in our marketing programs or they are unsuccessful in creating market awareness of our company and our applications, our revenue may grow more slowly than expected or may decline, and our financial performance may be adversely affected.

The markets in which we participate are intensely competitive, and if we do not compete effectively, our operating results could be adversely affected.

The overall market for enterprise work management software is rapidly evolving and subject to changing technology, shifting customer needs and frequent introductions of new applications. The intensity and nature of our competition varies significantly across our family of enterprise work management software applications. Many of our competitors and potential competitors are larger and have greater brand name recognition, longer operating histories, larger marketing budgets, and significantly greater resources than we do. Some of our smaller competitors may offer applications on a stand-alone basis at a lower price than our price due to lower overhead or other factors, while some of our larger competitors may offer applications at a lower price in an attempt to cross-sell additional products in the future or retain a customer using a different application.

We believe there are a limited number of direct competitors that provide a comprehensive enterprise work management software offering. However, we face competition both from point solution providers, including legacy on-premise enterprise systems, and other cloud-based work management software vendors that may address one or more of the functional elements of our applications, but are not designed to address a broad range of enterprise work management needs. In addition, we face competition from manual processes and traditional tools, such as paper-based techniques, spreadsheets, and email.

If our competitors' products, service, or technologies become more accepted than our enterprise work management applications, if they are successful in bringing their products or services to market earlier than ours, or if their products or services are more technologically capable than ours, our revenues could be adversely affected.

Mergers of, or other strategic transactions by, our competitors could weaken our competitive position or reduce our revenue.

If one or more of our competitors were to merge or partner with another of our competitors, the change in the competitive landscape could adversely affect our ability to compete effectively. In order to take advantage of customer demand for cloud-based software applications, vendors of legacy systems are expanding their cloud-based enterprise workplace management applications through acquisitions and internal development. A potential result of such expansion is that certain of our current or potential competitors may be acquired by third parties with greater available resources and the ability to further invest in product improvements and initiate or withstand substantial price competition. Our competitors also may establish or strengthen cooperative relationships with our current or future value-added resellers, third-party consulting firms or other parties with whom we have relationships, thereby limiting our ability to promote our applications. Disruptions in our business caused by these events could reduce our revenue. Our growth and long-term success depends, in part, on our ability to expand our international sales and operations. As our operations have expanded, we have established and currently maintain offices in the United States, Canada, and the United Kingdom. We have limited experience in operating in foreign jurisdictions and expect to continue to expand our relationship with international customers. Managing a global organization is difficult, time-consuming and expensive, and any international efforts that we may undertake may not be successful. In addition, conducting international operations subjects us to risks, including the following:

- uncertain political and economic climates;
- lack of familiarity and burdens of complying with foreign laws, accounting and legal standards, regulatory requirements, tariffs and other barriers;
- unexpected changes in regulatory requirements, taxes, trade laws, tariffs, export quotas, custom duties or other trade restrictions;
- lack of experience in connection with the localization of our applications, including translation into foreign languages and adaptation for local practices, and associated expenses and regulatory requirements;
- difficulties in adapting to differing technology standards;
- longer sales cycles and accounts receivable payment cycles and difficulties in collecting accounts receivable;
- difficulties in managing and staffing international operations, including differing legal and cultural expectations for employee relationships, and increased travel, infrastructure and legal compliance costs associated with international operations;
- fluctuations in exchange rates that may increase the volatility of our foreign-based revenue and expenses;
- potentially adverse tax consequences, including the complexities of foreign value-added tax, goods and services tax and other transactional taxes;
- reduced or varied protection for intellectual property rights in some countries;
- difficulties in managing and adapting to differing cultures and customs;
 - data privacy laws that require customer data to be stored and processed in a designated territory subject to laws different than the United States;
 - data privacy laws that require certain opt-in steps and restrict use and sharing of personally identifiable information than those required by the U.S. privacy laws;
- new and different sources of competition as well as laws and business practices favoring local competitors and local employees;
- compliance with anti-bribery laws, including compliance with the Foreign Corrupt Practices Act;
- increased financial accounting and reporting burdens and complexities; and
- restrictions on the repatriation of earnings.

Further, our international expansion efforts may be hindered by lower levels of cloud adoption and increased price sensitivity for our applications or other cloud-based offerings in international markets. As a result of these and other factors, international expansion may be more difficult, take longer, and not generate the results we anticipate, which could negatively impact our growth and business.

Fluctuations in the exchange rate of foreign currencies could result in losses on currency transactions.

Our customers are generally invoiced in the currency of the country in which they are located. In addition, we incur a portion of our operating expenses in foreign currencies, including Canadian dollars, British pounds and Euros, and in the future, as we expand into other foreign countries, we expect to incur operating expenses in other foreign currencies. As a result, we are exposed to foreign exchange rate fluctuations as the financial results of our international operations are translated from the local functional currency into U.S. dollars upon consolidation. A decline in the U.S. dollar relative to foreign functional currencies would increase our non-U.S. revenue and improve our operating results. Conversely, if the U.S. dollar strengthens relative to foreign functional currencies, our revenue and operating results would be adversely affected. We have not previously engaged in foreign currency hedging. If we decide to hedge our foreign currency exchange rate exposure, we may not be able to hedge effectively due to lack of experience, unreasonable costs, or illiquid markets.

Our sales cycles can be lengthy and variable, which may cause changes in our operating results.

Our sales cycle can vary substantially from customer to customer. A number of factors influence the length and variability of our sales cycles, including, for example:

- the need to educate potential customers about the uses and benefits of our applications;
- the duration of the commitment customers make in their agreements with us, which are typically one to three years;
- the discretionary nature of potential customers' purchasing and budget cycles and decisions;
- the competitive nature of potential customers' evaluation and purchasing processes;
- the functionality demands of potential customers;
- fluctuations in the enterprise work management needs of potential customers;
- the announcement or planned introduction of new products by us or our competitors; and
- the purchasing approval processes of potential customers.

Our sales cycles can make it difficult to predict the quarter in which revenue from a new customer may first be recognized. We may incur significant sales and marketing expenses and invest significant time and effort in anticipation of a sale that may never occur or only occur in a smaller amount or at a later date than anticipated. Delays inherent to our sales cycles could cause significant variability in our revenue and operating results for any particular period.

We have a limited history with our pricing models, and as a result, we may be forced to change the prices we charge for our applications or the pricing models upon which they are based.

We have limited experience with respect to determining the optimal prices and pricing models for certain of our applications and certain geographic markets. As the markets for our applications mature, or as competitors introduce products or services that compete with ours, including bundling competing offerings with additional products or services, we may be unable to attract new customers at the same price or based on the same pricing models as we have used historically. As a result, in the future we may be required to reduce our prices, which could adversely affect our financial performance. In addition, we may offer volume price discounts based on the number of seats purchased by a customer or the number of our applications purchased by a customer, which would effectively reduce the prices we charge for our applications. Also, we may be unable to renew existing customer agreements or enter into new customer agreements at the same prices or upon the same terms that we have historically, which could have a material adverse effect on our financial position.

Any disruption of service at the data centers that house our equipment and deliver our applications or with our hosting service provider could harm our business.

Our reputation and ability to attract, retain, and serve our customer is dependent upon the reliable performance of our computer systems and those of third parties that we utilize in our operations. These systems may be subject to damage or interruption from earthquakes, adverse weather conditions, other natural disasters, terrorist attacks, power loss, telecommunications failures, computer viruses, computer denial of service attacks, or other attempts to harm these systems. Interruptions in these systems, or with the Internet in general, could make our service unavailable or degraded or otherwise hinder our ability to deliver application data to our customers. Service interruptions, errors in our software, or the unavailability of computer systems used in our operations could diminish the overall attractiveness of our applications to existing and potential customers.

Our servers and those of third parties we use in our operations are vulnerable to computer viruses, physical or electronic break-ins, and similar disruptions. We have implemented security protocols within our applications; however, we have no assurance that our systems are completely secure. Our insurance does not cover expenses related to disruptions to our service or unauthorized access to our applications. Any significant disruption to our service or access to our systems could result in a loss of customers and adversely affect our business and results of operation. We utilize our own communications and computer hardware systems located either in our facilities or in that of a third-party Web hosting provider. In addition, we utilize third-party hosting services in connection with our business operations and have migrated our applications to Amazon Web Services (AWS), a third-party hosting platform. Problems faced by us or our third-party hosting providers, including technological or business-related disruptions, could adversely impact the experience of our customers.

If we fail to adequately manage our data center or hosting infrastructure capacity, our existing customers may experience service outages, and our new customers may experience delays in the deployment of our applications. We have experienced significant growth in the number of seats and volume of data that our hosting infrastructure supports. We seek to maintain sufficient excess capacity in our operations infrastructure to meet the needs of all of our customers. We also seek to maintain excess capacity to facilitate the rapid provision of new customer deployments and the expansion of existing customer deployments. However, obtaining new data center infrastructure requires lead time. If we do not accurately predict our infrastructure capacity requirements with sufficient lead time, our customers could experience service impairment that may subject us to financial penalties and liabilities and cause us to lose customers. If our data center infrastructure capacity fails to keep pace with increased subscriptions, customers may experience delays or reductions in the quality of our service as we seek to obtain additional capacity, which could harm our reputation and harm our business. As we add data center or hosting infrastructure capacity and support personnel in advance of anticipated growth, our cost of product revenue will increase, and if the anticipated revenue growth does not occur, our product gross profit will be adversely affected both in terms of absolute dollars and as a percentage of total revenues in any particular quarterly or annual period.

Security breaches may harm our business.

Our applications involve the storage and transmission of our customers' proprietary and confidential information, including personal or identifying information regarding their employees and customers. Any security breaches, unauthorized access, unauthorized usage, virus, or similar breach or disruption could result in loss of confidential information, damage to our reputation, early termination of our contracts, litigation, regulatory investigations, indemnity obligations, or other liabilities. If our security measures or those of our third-party data centers are breached as a result of third-party action, employee error, malfeasance or otherwise, resulting in unauthorized access to customer data, our reputation will be damaged, our business may suffer, and we could incur significant liability. Because the techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any or all of these issues could negatively affect our ability to attract new customers, cause existing customers to elect not to renew or upgrade their subscriptions, result in reputational damage, or subject us to third-party lawsuits, regulatory fines, or other action or liability, which could adversely affect our operating results.

Our success depends on our ability to adapt to technological change and continue to innovate.

The overall market for enterprise work management software is rapidly evolving and subject to changing technology, shifting customer needs, and frequent introductions of new applications. Our ability to attract new customers and increase revenue from existing customers will depend, in large part, on our ability to develop or acquire new applications and enhance and improve existing applications. To achieve market acceptance for our applications, we must effectively anticipate and offer applications that meet changing customer demands in a timely manner. Customers may require features and capabilities not offered by our current applications. We may experience difficulties that could delay or prevent our development, acquisition, or implementation of new applications and enhancements.

If we are unable to successfully develop or acquire new enterprise work management capabilities and functionality, enhance our existing applications to anticipate and meet customer preferences, sell our applications into new markets, or adapt to changing industry standards in enterprise work management, our revenue and results of operations would be adversely affected.

Adverse economic conditions may reduce our customers' ability to spend money on information technology or enterprise work management software, or our customers may otherwise choose to reduce their spending on information technology or enterprise work management software, which may adversely impact our business. Our business depends on the overall demand for information technology and enterprise work management software spend and on the economic health of our current and prospective customers. If worldwide economic conditions become unstable, our existing customers and prospective customers may re-evaluate their decision to purchase our applications. Weak global economic conditions or a reduction in information technology or enterprise work management software spending by our customers could harm our business in a number of ways, including longer sales cycles and lower prices for our applications.

We rely on third-party software that is required for the development and deployment of our applications, which may be difficult to obtain or which could cause errors or failures of our applications.

We rely on software licensed from or hosted by third parties to offer our applications. In addition, we may need to obtain licenses from third parties to use intellectual property associated with the development of our applications, which might not be available to us on acceptable terms, or at all. Any loss of the right to use any software required for the development, maintenance, and delivery of our applications could result in delays in the provision of our applications until equivalent technology is either developed by us or, if available, is identified, obtained and integrated, which could harm our business. Any errors or defects in third-party software could result in errors or a failure of our applications, which could harm our business.

If our applications contain serious errors or defects, we may lose revenue and market acceptance, and we may incur costs to defend or settle product-related claims.

Complex software applications such as ours often contain errors or defects, particularly when first introduced or when new versions or enhancements are released. Our current and future applications may contain serious defects.

Since our customers use our applications for critical business purposes, defects or other performance problems could negatively impact our customers and could result in:

- loss or delayed market acceptance and sales;
- breach of warranty or other claims for damages;
- sales credits or refunds for prepaid amounts related to unused subscription services;
- canceled contracts and loss of customers;
- diversion of development and customer service resources; and
- injury to our reputation.

The costs incurred in correcting any material errors or defects might be substantial and could adversely affect our operating results. Although our customer agreements typically contain provisions designed to limit our exposure to certain of the claims above, existing or future laws or unfavorable judicial decisions could negate these limitations. Even if not successful, a breach of warranty or other claim brought against us would likely be a

distraction to management, time-consuming and costly to resolve, and could seriously damage our reputation in the marketplace, making it harder for us to sell our applications. Additionally, our errors and omissions insurance may be inadequate or may not be available in the future on acceptable terms, or at all, and our policy may not cover all claims made against us. Further, defending a suit, regardless of its merit, could be costly and divert management's attention. If we fail to integrate our applications with other software applications and competitive or adjacent offerings that are developed by others, or fail to make our applications available on mobile and other handheld devices, our applications may become less marketable, less competitive or obsolete, and our operating results could be harmed.

Our applications integrate with a variety of other software applications, and also with competing and adjacent third-party offerings. We need to continuously modify and enhance our platform to adapt to changes in cloud-enabled hardware, software, networking, browser and database technologies. Any failure of our applications to integrate effectively with other software applications and product offerings could reduce the demand for our applications or result in customer dissatisfaction and harm to our business. If we are unable to respond to changes in the applications and tools with which our applications integrate in a cost-effective manner, our applications may become less marketable, less competitive, or obsolete. Competitors may also impede our attempts to create integration between our applications and competitive offerings, which may decrease demand for our applications. In addition, an increasing number of individuals within organizations are utilizing devices other than personal computers, such as mobile phones, tablets and other handheld devices, to access the Internet and corporate resources and to conduct business. If we cannot effectively make our applications available on these devices, we may experience difficulty attracting and retaining customers.

If we fail to develop and maintain relationships with third parties, our business may be harmed.

Our business depends in part on the development and maintenance of technology integration, joint sales, and reseller relationships. Maintaining relationships with third parties requires significant time and resources, as does integrating third-party content and technology. Further, third parties may not perform as expected under any relationships into which we may enter, and we may have disagreements or disputes with third parties that could negatively affect our brand and reputation. If we are unsuccessful in establishing or maintaining relationships with third parties, our ability to compete in the marketplace or to grow our revenue could be impaired, and our operating results could suffer.

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

A portion of our applications incorporate open source software, and we expect to continue to incorporate open source software in the future. Few of the licenses applicable to open source software have been interpreted by courts, and their application to the open source software integrated into our proprietary software may be uncertain. Moreover, we cannot provide any assurance that we have not incorporated additional open source software in our applications in a manner that is inconsistent with the terms of the license or our current policies and procedures. If we fail to comply with these licenses, we may be subject to certain requirements, including requirements that we offer our applications that incorporate the open source software for no cost, that we make available source code for modifications or derivative works we create based upon, incorporating or using the open source software, and that we license such modifications or derivative works under the terms of applicable open source licenses. If an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations and could be subject to significant damages, enjoined from the sale of our applications that contained the open source software, and required to comply with the foregoing conditions, which could disrupt the distribution and sale of some of our applications. In addition, there have been claims challenging the ownership of open source software against companies that incorporate open source software into their products. As a result, we could be subject to suits by parties claiming infringement due to the reliance by our applications on certain open source software. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition, or require us to devote additional research and development resources to change our applications.

Certain of our operating results and financial metrics are difficult to predict as a result of seasonality. We have historically experienced seasonality in terms of when we enter into customer agreements. We sign a significantly higher percentage of agreements with new customers, and renew agreements with existing customers, in the fourth quarter of each calendar year as our customers tend to follow budgeting cycles at the end of the calendar year. Our cash flow from operations has historically been higher in the first quarter of each calendar year than in other quarters. This seasonality is reflected to a much lesser extent, and sometimes is not immediately apparent, in our revenue, due to the fact that we defer revenue recognition. In addition, seasonality may be difficult to observe in our financial results during periods in which we acquire businesses, as such results typically are most significantly impacted by such acquisitions. We expect this seasonality to continue, or possibly increase in the future, which may cause fluctuations in our operating results and financial metrics. If our quarterly operating results or outlook fall below the expectations of research analysts or investors, the price of our common stock could decline substantially. We could incur substantial costs as a result of any claim of infringement of another party's intellectual property rights. In recent years, there has been significant litigation involving patents and other intellectual property rights in our industry. Companies providing software are increasingly bringing and becoming subject to suits alleging infringement of proprietary rights, particularly patent rights, and to the extent we gain greater market visibility, we face a higher risk of being the subject of intellectual property infringement claims. We do not have a significant patent portfolio, which could prevent us from deterring patent infringement claims through our own patent portfolio, and our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we have. The risk of patent litigation has been amplified by the increase in the number of a type of patent holder, which we refer to as a non-practicing entity, whose sole business is to assert such claims and against whom our own intellectual property portfolio may provide little deterrent value. We could incur substantial costs in prosecuting or defending any intellectual property litigation. If we sue to enforce our rights or are sued by a third-party that claims that our applications infringe its rights, the litigation could be expensive and could divert our management resources. Moreover, our acquisition strategy could expose us to additional risk of intellectual property litigation as we acquire new businesses with diverse software offerings and intellectual property assets. In addition, in most instances, we have agreed to indemnify our customers against claims that our applications infringe the intellectual property rights of third parties. Our business could be adversely affected by any significant disputes between us and our customers as to the applicability or scope of our indemnification obligations to them. Any intellectual property litigation to which we might become a party, or for which we are required to provide indemnification, may require us to do one or more of the following:

- cease selling or using applications that incorporate the intellectual property that we allegedly infringe;
- make substantial payments for legal fees, settlement payments or other costs or damages;
- obtain a license, which may not be available on reasonable terms or at all, to sell or use the relevant technology; or
- redesign the allegedly infringing applications to avoid infringement, which could be costly, time-consuming or impossible.

If we are required to make substantial payments or undertake any of the other actions noted above as a result of any intellectual property infringement claims against us or any obligation to indemnify our customers for such claims, such payments or actions could harm our business. We could incur substantial costs in protecting our intellectual property from infringement, and any failure to protect our intellectual property could impair our business. Our success and ability to compete depend, in part, upon our intellectual property. We seek to protect the source code for our proprietary software and other proprietary technology and information under a combination of copyright, trade secrets, and patent law, and we seek to protect our brands through trademark law. Our policy is to enter into confidentiality agreements, or agreements with confidentiality provisions, with our employees, consultants, vendors, and customers, and to control access to our software, documentation, and other proprietary

information. Despite these precautions, it may be possible for unauthorized parties to copy our software or other proprietary technology or information, or to develop similar software independently.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our applications or to obtain and use information that we regard as proprietary. Policing unauthorized use of our applications is difficult, and we are unable to determine the extent to which piracy of our software exists or will occur in the future. Litigation may be necessary in the future to enforce our intellectual property rights, protect our trade secrets, determine the validity and scope of the proprietary rights of others, or defend against claims of infringement or invalidity. Such litigation could be costly, time-consuming, and distracting to management, result in a diversion of resources or the narrowing or invalidation of portions of our intellectual property, and have a material adverse effect on our business, operating results, and financial condition. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights or alleging that we infringe the counterclaimant's own intellectual property. These steps may be inadequate to protect our intellectual property. Third parties may challenge the validity or ownership of our intellectual property, and these challenges could cause us to lose our rights, in whole or in part, to such intellectual property or narrow its scope such that it no longer provides meaningful protection. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Despite our precautions, it may be possible for unauthorized third parties to copy our products and use information that we regard as proprietary to create products and services that compete with ours. Some license provisions protecting against unauthorized use, copying, transfer, and disclosure of our applications may be unenforceable under the laws of certain jurisdictions and foreign countries. Further, the laws of some countries do not protect proprietary rights to the same extent as the laws of the United States. To the extent we expand our international activities, our exposure to unauthorized copying, transfer, and use of our applications and proprietary technology or information may increase.

There can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology. If we fail to meaningfully protect our intellectual property, our business, brands, operating results and financial condition could be materially harmed.

Unanticipated challenges by tax authorities could harm our future results.

We are subject to income taxes in the United States and various non-U.S. jurisdictions. We may be subject to income tax audits by various tax jurisdictions throughout the world, many of which have not established clear guidance on the tax treatment of cloud-based companies. The application of tax laws in such jurisdictions may be subject to diverging and sometimes conflicting interpretations by tax authorities in these jurisdictions. Although we believe our income tax liabilities are reasonably estimated and accounted for in accordance with applicable laws and principles, an adverse resolution of one or more uncertain tax positions in any period could have a material impact on the results of operations for that period.

Taxing authorities may successfully assert that we should have collected or, in the future, should collect additional sales and use taxes, and we could be subject to liability with respect to past or future sales, which could adversely affect our results of operations.

We have not historically filed sales and use tax returns or collected sales and use taxes in all jurisdictions in which we have sales, based on our belief that such taxes are not applicable. Taxing authorities may seek to impose such taxes on us, including for past sales, which could result in penalties and interest. Any such tax assessments may adversely affect the results of our operations.

Taxing authorities could reallocate our taxable income among our subsidiaries, which could increase our consolidated tax liability.

We conduct integrated operations internationally through subsidiaries in various tax jurisdictions pursuant to transfer pricing arrangements between our subsidiaries and between our subsidiaries and us. If two or more affiliated companies are located in different countries, the tax laws or regulations of each country generally require that transfer prices be the same as those between unrelated companies dealing at arms' length and that contemporaneous documentation is maintained to support the transfer prices. While we believe that we operate in compliance with applicable transfer pricing laws and intend to continue to do so, our transfer pricing procedures are not binding on

applicable tax authorities. If tax authorities in any of these countries were to successfully challenge our transfer prices as not reflecting arms' length transactions, they could require us to adjust our transfer prices and thereby reallocate our income to reflect these revised transfer prices, which could result in a higher tax liability to us. Such reallocations may subject us to interest and penalties that would increase our consolidated tax liability, and could adversely affect our financial condition, results of operations, and cash flows.

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

As of December 31, 2017, we had federal net operating loss carryforwards of approximately \$181.9 million and research and development credit carryforwards of approximately \$3.9 million, which begin expiring in 2018. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research tax credits, to offset its post-change income and taxes may be limited. In general, an "ownership change" occurs if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules apply under state tax laws. Based on analysis of acquired net operating losses and credits, utilization of our net operating losses and research and development credits will be subject to annual limitations. The annual limitation will result in the expiration of \$77 million of federal net operating losses and \$3.9 million of research and development credit carryforwards before utilization. In the event that it is determined that we have in the past experienced additional ownership changes, or if we experience one or more ownership changes as a result of future transactions in our stock, then we may be further limited in our ability to use our net operating loss carryforwards and other tax assets to reduce taxes owed on the net taxable income that we earn. Any such limitations on the ability to use our net operating loss carryforwards and other tax assets could adversely impact our business, financial condition, and operating results.

Changes in laws or regulations related to the Internet may diminish the demand for our applications, and any failure of the Internet infrastructure could have a negative impact on our business.

We deliver our cloud-based applications through the Internet. Federal, state or foreign government bodies or agencies have in the past adopted, and may in the future adopt, laws or regulations affecting data privacy and the use of the Internet. In addition, government agencies or private organizations may begin to impose taxes, fees, or other charges for accessing the Internet or on commerce conducted via the Internet. Increased enforcement of existing laws and regulations, as well as any laws, regulations, or changes that may be adopted or implemented in the future, could limit the growth of the use of cloud-based applications or communications generally, result in a decline in the use of the Internet and the viability of cloud-based applications such as ours, and reduce the demand for our applications.

The success of our enterprise work management software applications depends on the development and maintenance of the Internet infrastructure. This includes maintenance of a reliable network backbone with the necessary speed, data capacity and security, as well as the timely development of complementary products for providing reliable Internet access and services. The Internet has experienced, and is likely to continue to experience, significant growth in the amount of traffic and may be unable to support such demands. In addition, problems caused by viruses, worms, malware, and similar programs may harm the performance of the Internet. Any outages and delays in the Internet could reduce the level of usage of our services, which could materially adversely affect our business, financial condition, results of operations, and prospects.

Privacy concerns and laws or other domestic or foreign regulations may reduce the effectiveness of our applications and adversely affect our business.

Our customers can use our applications to collect, use, and store personal or identifying information regarding their customers and employees. Federal, state and foreign government bodies and agencies have adopted, are considering adopting, or may adopt laws and regulations regarding the collection, use, storage, and disclosure of personal information obtained from individuals. The costs of compliance with, and other burdens imposed by, such laws and regulations that are applicable to the businesses of our customers may limit the use and adoption of our applications and reduce overall demand, or lead to significant fines, penalties or liabilities for any noncompliance with such privacy laws. For example, the European Union and many countries in Europe have stringent privacy laws and regulations that may impact our ability to profitably operate in certain European countries. Furthermore, privacy

concerns may cause our customers to resist providing the personal data necessary to allow them to use our applications effectively. Even the perception of privacy concerns, whether or not valid, may inhibit market adoption of our applications in certain industries. All of these domestic and international legislative and regulatory initiatives may adversely affect our customers' ability to process, handle, store, use, and transmit demographic and personal information from their customers and employees, which could reduce demand for our applications.

In addition to government activity, privacy advocacy groups and the technology and other industries are considering various new, additional, or different self-regulatory standards that may place additional burdens on us. If the processing of personal information were to be curtailed in this manner, our applications would be less effective, which may reduce demand for our applications and adversely affect our business.

We are subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws. Our applications are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. Exports of our applications must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including: the possible loss of export or import privileges; fines, which may be imposed on us and responsible employees or managers; and, in extreme cases, the incarceration of responsible employees or managers. Obtaining the necessary authorizations, including any required license, for a particular sale may be time-consuming, is not guaranteed, and may result in the delay or loss of sales opportunities. In addition, changes in our applications or changes in applicable export or import regulations may create delays in the introduction and sale of our applications in international markets, prevent our customers with international operations from deploying our applications, or, in some cases, prevent the export or import of our applications to certain countries, governments, or persons altogether. Any change in export or import regulations, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons or technologies targeted by such regulations, could also result in decreased use of our applications, or in our decreased ability to export or sell our applications to existing or potential customers with international operations. Any decreased use of our applications or limitation on our ability to export or sell our applications would likely adversely affect our business.

Furthermore, we incorporate encryption technology into certain of our applications. Various countries regulate the import of certain encryption technology, including through import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our applications or could limit our customers' ability to implement our applications in those countries. Encrypted applications and the underlying technology may also be subject to export control restrictions. Governmental regulation of encryption technology and regulation of imports or exports of encryption products, or our failure to obtain required import or export approval for our applications, when applicable, could harm our international sales and adversely affect our revenue. Compliance with applicable regulatory requirements regarding the export of our applications, including with respect to new releases of our applications, may create delays in the introduction of our applications in international markets, prevent our customers with international operations from deploying our applications throughout their globally-distributed systems or, in some cases, prevent the export of our applications to some countries altogether.

Moreover, U.S. export control laws and economic sanctions programs prohibit the shipment of certain products and services to countries, governments, and persons that are subject to U.S. economic embargoes and trade sanctions. Even though we take precautions to prevent our applications from being shipped or provided to U.S. sanctions targets, our applications and services could be shipped to those targets or provided by third parties despite such precautions. Any such shipment could have negative consequences, including government investigations, penalties and reputational harm.

If we are unable to implement and maintain effective internal controls over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our common stock may be negatively affected.

As a public company, we are required to maintain internal controls over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act, requires that we evaluate and determine the effectiveness of our internal controls over financial reporting. Our independent registered public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting until the later of our second annual report or the first annual report required to be filed with the SEC following the date we are no longer an “emerging growth company” as defined in the JOBS Act. If we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis, and our financial statements may be materially misstated. We are in the process of designing and implementing the internal controls over financial reporting required to comply with this obligation, which process will be time consuming, costly and complicated. We may need additional finance and accounting personnel with certain skill sets to assist us with the reporting requirements we will encounter as a public company and to support our anticipated growth. In addition, implementing internal controls may distract our officers and employees, entail substantial costs to modify our existing processes, and take significant time to complete.

In the future, if we identify material weaknesses in our internal controls over financial reporting, if we are unable to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, if we are unable to assert that our internal controls over financial reporting are effective, or if our independent registered public accounting firm is not required to express an opinion due to the provisions of the JOBS Act or is unable to express an opinion as to the effectiveness of our internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports; the market price of our common stock could be negatively affected; and we could become subject to investigations by the stock exchange on which our securities are listed, the Securities and Exchange Commission (SEC), or other regulatory authorities, which could require additional financial and management resources.

We incur significant costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could harm our operating results.

As a public company, we will incur significant legal, accounting, investor relations, and other expenses, including costs associated with public company reporting requirements. We also have incurred and will incur costs associated with current corporate governance requirements, including requirements under Section 404 and other provisions of the Sarbanes-Oxley Act, as well as rules implemented by the SEC and the exchange on which we list our common stock. These rules and regulations may substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. As a public company, it is more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantially higher costs to obtain coverage or to accept reduced policy limits and coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as our executive officers.

We are an “emerging growth company,” and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors. We are an “emerging growth company,” as defined in the JOBS Act and, for as long as we continue to be an emerging growth company, we may choose to take advantage of certain exemptions from various reporting requirements applicable to other public companies including, but not limited to: not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act; reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and exemptions from the requirements to hold a nonbinding advisory vote on executive compensation and to obtain stockholder approval of any golden parachute payments not previously approved. We may take advantage of these provisions until such time that we are no longer an “emerging growth company.” We will cease to be an “emerging growth company” upon the earliest of the first fiscal year following the fifth anniversary of the consummation of our initial public offering; the first fiscal year after our annual gross revenue is \$1 billion or more; the date on which we have, during the previous three-year period, issued more than \$1 billion in non-convertible debt securities; or the date on which we are deemed to be a “large accelerated filer” as defined in the Securities Exchange Act of 1934, or the Exchange Act. To the extent we take advantage of any of these reduced reporting burdens in this Annual Report or in future filings, the information that we provide our security holders may be different than you might get from other public companies in which you hold equity interests. We cannot predict if investors will find our

common stock less attractive because we may rely on these

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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 our stock price may be more volatile.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We are choosing to “opt out” of such extended transition period, however, 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. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable. The requirements of being a public company may strain our resources and divert management’s attention.

Risks Related to Ownership of Our Common Stock

The market price of our common stock may be volatile, which could result in substantial losses for investors.

The market price of our common stock could be subject to significant fluctuations. Some of the factors that may cause the market price of our common stock to fluctuate include:

- actual or anticipated changes in the estimates of our operating results that we provide to the public, our failure to meet these projections or changes in recommendations by securities analysts that elect to follow our common stock;
- price and volume fluctuations in the overall equity markets from time to time;
- significant volatility in the market price and trading volume of comparable companies;
- changes in the market perception of enterprise work management software generally or in the effectiveness of our applications in particular;
- disruptions in our services due to computer hardware, software or network problems;
- announcements of technological innovations, new products, strategic alliances or significant agreements by us or by our competitors;
- announcements of new customer agreements or upgrades and customer downgrades or cancellations or delays in customer purchases;
- litigation involving us;
- our ability to successfully consummate and integrate acquisitions;
- investors’ general perception of us;
- recruitment or departure of key personnel;
- sales of our common stock by us or our stockholders;
- fluctuations in the trading volume of our shares or the size of our public float;
- and
- general economic, legal, industry and market conditions and trends unrelated to our performance.

In the past, following periods of volatility in the market price of a company’s securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. If we were to become involved in securities litigation, it could result in substantial costs, divert management’s attention and resources from our business and adversely affect our business.

If securities or industry analysts do not publish, or cease publishing, research or reports about us, our business or our market, if they publish negative evaluations of our stock, or if we fail to meet the expectations of analysts, the price of our stock and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If few analysts commence coverage of us, the trading price of our stock would likely decrease if one or more of the analysts covering our business downgrade their evaluation of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline. Furthermore, if our operating results fail to meet analysts' expectations our stock price would likely decline. Sales of a substantial number of shares of our common stock in the public market by our existing stockholders could cause our stock price to fall.

The price of our common stock could decline if there are substantial sales of our common stock in the public stock market. On August 28, 2017, we filed a registration statement on Form S-3 on behalf of certain of our stockholders. If the stockholders listed in that registration statement sell a significant amount of stock at one time, our stock price could be negatively impacted by such sale. We also have registered shares of common stock that we may issue under our stock-based compensation plans, which can be freely sold in the public market upon issuance, subject to the lock-up agreements and the restrictions imposed on our affiliates under Rule 144 under the Securities Act. Our 2014 Equity Incentive Plan provides for automatic increases to the number of shares available for issuance thereunder and we undertake each year to add those shares to a registration statement on Form S-8. These increases could have a negative effect on our stock price as the holders of such shares elect to sell their shares.

Our existing directors, executive officers and principal stockholders have substantial control over us, which could limit your ability to influence the outcome of key transactions, including a change of control.

As of December 31, 2017, our directors, executive officers, principal stockholders and their affiliates beneficially owned or controlled, directly or indirectly, a majority of our outstanding common stock. As a result, these stockholders, acting together, could have significant influence over the outcome of matters submitted to our stockholders for approval, including the election or removal of directors, any amendments to our certificate of incorporation or bylaws and any merger, consolidation or sale of all or substantially all of our assets, and over the management and affairs of our company. This concentration of ownership may also have the effect of delaying or preventing a change in control of our company or discouraging others from making tender offers for our shares and might affect the market price of our common stock.

Because we do not expect to pay any dividends on our common stock for the foreseeable future, our investors may never receive a return on their investment.

We do not anticipate that we will pay any cash dividends to holders of our common stock in the foreseeable future. Instead, we plan to retain any earnings to maintain and expand our existing operations. In addition, our ability to pay cash dividends is currently limited by the terms of our existing loan facility, which prohibits our payment of dividends on our capital stock without prior consent, and any future credit facility may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any return on their investment.

Anti-takeover provisions in our amended and restated certificate of incorporation and our amended and restated bylaws, as well as provisions of Delaware law, might discourage, delay or prevent a change in control of our company or changes in our board of directors or management and, therefore, depress the trading price of our common stock. Provisions in our certificate of incorporation and bylaws, as amended and restated, will contain provisions that may depress the market price of our common stock by acting to discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or

frustrate attempts by our stockholders to replace or remove members of our board of directors or our management. These provisions include the following:

our certificate of incorporation provides for a classified board of directors with staggered three-year terms so that not all members of our board of directors are elected at one time;

directors may be removed by stockholders only for cause;

our board of directors has the right to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;

special meetings of our stockholders may be called only by our Chief Executive Officer, our board of directors or holders of not less than the majority of our issued and outstanding capital stock limiting the ability of minority stockholders to take certain actions without an annual meeting of stockholders;

our stockholders may not act by written consent unless the action to be effected and the taking of such action by written consent are approved in advance by our board of directors and, as a result, a holder, or holders, controlling a majority of our capital stock would generally not be able to take certain actions without holding a stockholders' meeting;

our certificate of incorporation prohibits cumulative voting in the election of directors. This limits the ability of minority stockholders to elect director candidates;

stockholders must provide timely notice to nominate individuals for election to the board of directors or to propose matters that can be acted upon at an annual meeting of stockholders and, as a result, these provisions may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us; and

our board of directors may issue, without stockholder approval, shares of undesignated preferred stock, making it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock from engaging in certain business combinations with us.

Any provision of our certificate of incorporation and bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock and could also affect the price that some investors are willing to pay for our common stock. The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal corporate offices are located in Austin, Texas, where we occupy approximately 9,900 square feet of space under a lease that expires in March 2020. We occupy additional leased facilities for operations of approximately 16,900 square feet in Montreal, Quebec, and approximately 22,900 square feet in Lincoln, Nebraska.

Item 3. Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceedings that we believe would, individually or taken together, have a material adverse effect on our business, operating results, financial condition, or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

Our common stock is traded on the NASDAQ Global Market, or Nasdaq, under the symbol "UPLD".

As of March 1, 2018, the last reported sales price of our common stock on the Nasdaq Global Market was \$24.10 and there were 81 stockholders of record of our common stock, including Computershare Limited, which holds shares of our common stock on behalf of an indeterminate number of beneficial owners.

The table below sets forth the high and low sales prices per share of our common stock as reported on the Nasdaq Global Market for the periods indicated:

| | 2017 | |
|------------------------------|---------|---------|
| Year Ended December 31, 2017 | Low | High |
| Fourth quarter | \$20.30 | \$24.62 |
| Third Quarter | \$19.82 | \$25.33 |
| Second Quarter | \$15.54 | \$23.95 |
| First Quarter | \$8.90 | \$15.89 |
| | 2016 | |
| Year Ended December 31, 2016 | Low | High |
| Fourth quarter | \$7.85 | \$9.74 |
| Third Quarter | \$7.44 | \$9.90 |
| Second Quarter | \$6.80 | \$7.77 |
| First Quarter | \$6.00 | \$7.19 |

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

Performance Graph

Notwithstanding any statement to the contrary in any of our filings with the SEC, the following information shall not be deemed "filed" with the SEC or "soliciting material" under the Securities Exchange Act of 1934 and shall not be incorporated by reference into any such filings irrespective of any general incorporation language contained in such filing.

The following graph compares the total cumulative stockholder return on our common stock with the total cumulative return of the Nasdaq Computer Technology Index and the S&P 500 Composite Index during the period commencing on November 6, 2014, the initial trading day of our common stock, and ending on December 31, 2017. The graph assumes a \$100 investment at the beginning of the period in our common stock, the stocks represented in the S&P 500 Composite Index and the stocks represented in Nasdaq Computer Technology Index, and reinvestment of any dividends. The Computer Technology Index is designed to represent a cross section of widely-held U.S. corporations involved in various phases of the computer industry. The Index is market-value (capitalization) weighted, based on the aggregate market value of its 27 component stocks. Historical stock price performance should not be relied upon as an indication of future stock price performance.

Recent Sales of Unregistered Securities

In November 2016, the Company issued 24,587 shares of common stock valued at approximately \$200,000 as a result of the escrow release in connection with the acquisition of Ultriva, Inc.

Issuer Purchases of Equity Securities

None.

Equity Compensation Plan Information

For information regarding securities authorized for issuance under equity compensation plans, see Part III, Item 12 of this Annual Report on Form 10-K.

Item 6. Selected Financial Data

The following selected historical consolidated financial data below should be read in conjunction with Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” our consolidated financial statements and the related notes appearing in Item 8: “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K to fully understand factors that may affect the comparability of the information presented below.

The consolidated statements of operations data for the years ended December 31, 2017, 2016, and 2015 and the selected consolidated balance sheet data as of December 31, 2017 and December 31, 2016 are derived from our audited consolidated financial statements appearing in Item 8: “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K. The statement of operations data for the years ended December 31, 2014 and 2013 and the selected consolidated balance sheet data as of December 31, 2015, 2014, and 2013 are derived from our consolidated financial statements not included in this Annual Report on Form 10-K. To obtain further information about our historical results, including our historical acquisitions, for which results of operations are included in our consolidated financial statements beginning on the dates of acquisition, you should read the following selected consolidated financial data in conjunction with our consolidated financial statements and related notes, the information in the section of this filing titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the other financial information included elsewhere in this filing. Our historical results are not necessarily indicative of the results to be expected in the future, and our interim results are not necessarily indicative of the results to be expected in the future.

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2017 2016 2015 2014 2013
(dollars in thousands, except share and per share data)

Consolidated Statements of Operations Data:

Revenue:

| | | | | | |
|--------------------------|----------|----------|----------|----------|----------|
| Subscription and support | \$85,467 | \$65,552 | \$57,193 | \$48,625 | \$30,887 |
| Perpetual license | 4,346 | 1,650 | 2,805 | 2,787 | 2,003 |
| Total product revenue | 89,813 | 67,202 | 59,998 | 51,412 | 32,890 |
| Professional services | 8,139 | 7,565 | 9,913 | 13,162 | 8,303 |
| Total revenue | 97,952 | 74,767 | 69,911 | 64,574 | 41,193 |

Cost of revenue:

| | | | | | |
|--------------------------|--------|--------|--------|--------|--------|
| Subscription and support | 28,454 | 22,734 | 19,586 | 14,042 | 7,787 |
| Professional services | 5,193 | 4,831 | 7,085 | 9,079 | 5,680 |
| Total cost of revenue | 33,647 | 27,565 | 26,671 | 23,121 | 13,467 |
| Gross profit | 64,305 | 47,202 | 43,240 | 41,453 | 27,726 |

Operating expenses:

| | | | | | |
|---------------------------------|-----------|----------|-----------|-----------|----------|
| Sales and marketing | 15,307 | 12,160 | 12,965 | 14,670 | 10,625 |
| Research and development | 15,795 | 14,919 | 15,778 | 26,165 | 10,340 |
| Refundable Canadian tax credits | (542) | (513) | (470) | (1,094) | (583) |
| General and administrative | 23,291 | 18,286 | 18,201 | 13,561 | 6,832 |
| Depreciation and amortization | 6,498 | 5,291 | 4,534 | 4,310 | 3,670 |
| Acquisition-related expenses | 15,092 | 5,583 | 2,455 | 2,186 | 1,461 |
| Total operating expenses | 75,441 | 55,726 | 53,463 | 59,798 | 32,345 |
| Loss from operations | (11,136) | (8,524) | (10,223) | (18,345) | (4,619) |

Other expense:

| | | | | | |
|--|-------------|-------------|-------------|-------------|------------|
| Interest expense, net | (6,582) | (2,781) | (1,858) | (1,951) | (2,797) |
| Other income (expense), net | 289 | (678) | (544) | 101 | (431) |
| Total other expense | (6,293) | (3,459) | (2,402) | (1,850) | (3,228) |
| Loss before provision for income taxes | (17,429) | (11,983) | (12,625) | (20,195) | (7,847) |
| Provision for income taxes | (1,296) | (1,530) | (1,039) | 78 | (708) |
| Loss from continuing operations | (18,725) | (13,513) | (13,664) | (20,117) | (8,555) |
| Income (loss) from discontinued operations | — | — | — | — | (642) |
| Net loss | \$(18,725) | \$(13,513) | \$(13,664) | \$(20,117) | \$(9,197) |
| Preferred stock dividends and accretion | — | — | — | (1,524) | (98) |
| Net loss attributable to common shareholders | \$(18,725) | \$(13,513) | \$(13,664) | \$(21,641) | \$(9,295) |

Net loss per common share:

| | | | | | |
|--|------------|------------|------------|-----------|-----------|
| Loss from continuing operations per common share, basic and diluted | \$(1.02) | \$(0.82) | \$(0.91) | \$(4.43) | \$(7.23) |
| Income (loss) from discontinued operations per common share, basic and diluted | \$— | \$— | \$— | \$— | \$(0.54) |
| Net loss per common share, basic and diluted | \$(1.02) | \$(0.82) | \$(0.91) | \$(4.43) | \$(7.77) |
| Weighted-average common shares outstanding, basic and diluted | 18,411,247 | 16,472,799 | 14,939,601 | 4,889,901 | 1,196,668 |

| | 2017 | 2016 | 2015 | 2014 | 2013 | |
|---|------------------------|----------------------------------|----------|----------|----------|------|
| | (dollars in thousands) | | | | | |
| Consolidated Balance Sheet Data: | | | | | | |
| Cash and cash equivalents | \$22,326 | \$28,758 | \$18,473 | \$30,988 | \$4,703 | |
| Property and equipment, net | 2,927 | 4,356 | 6,001 | 3,930 | 3,942 | |
| Intangible assets, net | 70,043 | 28,512 | 31,526 | 34,751 | 34,747 | |
| Goodwill | 154,607 | 69,097 | 47,422 | 45,146 | 33,630 | |
| Total assets | 281,259 | 150,588 | 122,414 | 135,686 | 94,847 | |
| Deferred revenue | 45,377 | 23,799 | 19,939 | 21,376 | 17,036 | |
| Total liabilities | 189,844 | 91,575 | 62,144 | 64,289 | 60,191 | |
| Redeemable convertible preferred stock | — | — | — | — | 50,538 | |
| Total stockholders' equity (deficit) | 91,415 | 59,013 | 60,270 | 71,397 | (15,882) | |
| | | 2017 | 2016 | 2015 | 2014 | 2013 |
| | | (dollars in thousands, except %) | | | | |

Other Financial Data:

| | | | | | |
|---|-----------|----------|----------|----------|----------|
| Annualized recurring revenue value at year-end ⁽¹⁾ | \$106,099 | \$63,968 | \$58,918 | \$56,800 | \$49,061 |
| Annual net dollar retention rate ⁽²⁾ | 93 | % 95 | % 90 | % 96 | % 90 |
| Adjusted EBITDA ⁽³⁾ | \$30,316 | \$12,616 | \$4,143 | \$4,213 | \$3,576 |

(1) Annualized recurring revenue value at year-end. The value as of December 31 equals the monthly value of our recurring revenue contracts measured as of December 31 multiplied by 12. This measure excludes the revenue value of certain uncontracted overage fees and on-demand service fees. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Key Metrics" for additional discussion of this key metric.

(2) Annual net dollar retention rate. We define annual net dollar retention rate as of December 31 as the aggregate annualized recurring revenue value at December 31 from those customers that were also customers as of December 31 of the prior fiscal year, divided by the aggregate annualized recurring revenue value from all customers as of December 31 of the prior fiscal year. This measure excludes the revenue value of certain uncontracted overage fees and on-demand service fees. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Key Metrics" for additional discussion of this key metric.

(3) Adjusted EBITDA. We monitor our Adjusted EBITDA to help us evaluate the effectiveness and efficiency of our operations. Adjusted EBITDA is a non-GAAP financial measure. We define Adjusted EBITDA as net income (loss), calculated in accordance with GAAP, plus net income (loss) from discontinued operations, depreciation and amortization expense, interest expense, net, other expense (income), net, provision for income taxes, stock-based compensation expense, acquisition-related expenses, non-recurring litigation costs, and purchase accounting adjustments for deferred revenue. Prior to the filing of this Annual Report on Form 10-K, we did not include purchase accounting adjustments for deferred revenue as a component of Adjusted EBITDA, and as such, the prior year Adjusted EBITDA amounts presented herein have been recast to reflect the inclusion of purchase accounting adjustments for deferred revenue.

The following table presents a reconciliation of net loss to Adjusted EBITDA:

| | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|------------------------|------------|------------|------------|-----------|
| | (dollars in thousands) | | | | |
| Net Loss | \$(18,725) | \$(13,513) | \$(13,664) | \$(20,117) | \$(9,197) |
| Income (loss) from discontinued operations | — | — | — | — | 642 |
| Depreciation and amortization expense | 11,914 | 9,794 | 8,451 | 7,457 | 5,310 |
| Interest expense, net | 6,582 | 2,781 | 1,858 | 1,951 | 2,797 |
| Other expense (income), net | (289) | 678 | 544 | (101) | 431 |
| Provision for income taxes | 1,296 | 1,530 | 1,039 | (78) | 708 |
| Stock-based compensation expense | 9,977 | 4,333 | 2,741 | 1,077 | 498 |
| Acquisition-related expense | 15,092 | 5,583 | 2,455 | 2,186 | 1,461 |
| Stock-based compensation expense - related party vendor | — | — | — | 11,220 | — |
| Non-recurring litigation costs | — | 25 | 406 | 256 | — |
| Purchase accounting deferred revenue discount | 4,469 | 1,405 | 313 | 362 | 926 |
| Adjusted EBITDA | \$30,316 | \$12,616 | \$4,143 | \$4,213 | \$3,576 |

We believe that Adjusted EBITDA provides useful information to management, investors and others in understanding and evaluating our operating results for the following reasons:

Adjusted EBITDA is widely used by investors and securities analysts to measure a company's operating performance without regard to items that can vary substantially from company to company depending upon their financing, capital structures and the method by which assets were acquired;

our management uses Adjusted EBITDA in conjunction with GAAP financial measures for planning purposes, in the preparation of our annual operating budget, as a measure of our operating performance, to assess the effectiveness of our business strategies and to communicate with our board of directors concerning our financial performance because Adjusted EBITDA eliminates the impact of items that we do not consider indicative of our core operating performance; and

- Adjusted EBITDA provides more consistency and comparability with our past financial performance, facilitates period-to-period comparisons of our operations and also facilitates comparisons with other companies, many of which use similar non-GAAP financial measures to supplement their GAAP results.

Adjusted EBITDA should not be considered as an alternative to net loss or any other measure of financial performance calculated and presented in accordance with GAAP. The use of Adjusted EBITDA as an analytical tool has limitations such as:

depreciation and amortization are non-cash charges, and the assets being depreciated or amortized will often have to be replaced in the future and Adjusted EBITDA does not reflect cash requirements for such replacements; however, much of the depreciation and amortization currently reflected relates to amortization of acquired intangible assets as a result of business combination purchase accounting adjustments, which will not need to be replaced in the future;

Adjusted EBITDA may not reflect changes in, or cash requirements for, our working capital needs or contractual commitments;

Adjusted EBITDA does not reflect the potentially dilutive impact of stock-based compensation;

Adjusted EBITDA does not reflect interest or tax payments that could reduce cash available for use; and

other companies, including companies in our industry, might calculate Adjusted EBITDA or similarly titled measures differently, which reduces their usefulness as comparative measures.

Because of these limitations, you should consider Adjusted EBITDA together with other financial performance measures, including various cash flow metrics, net loss and our other GAAP results.

The following tables present stock-based compensation, depreciation and amortization included in the respective line items in our Consolidated Statement of Operations:

Year Ended December 31,
2017 2016 2015 2014 2013
(dollars in thousands)

Stock-based compensation:

| | | | | | |
|----------------------------|---------|---------|---------|---------|-------|
| Cost of revenue | \$436 | \$44 | \$42 | \$49 | \$16 |
| Research and development | 796 | 204 | 203 | 61 | 12 |
| Sales and marketing | 232 | 105 | 65 | 39 | 15 |
| General and administrative | 8,513 | 3,980 | 2,431 | 928 | 455 |
| Total | \$9,977 | \$4,333 | \$2,741 | \$1,077 | \$498 |

Year Ended December 31,
2017 2016 2015 2014 2013
(dollars in thousands)

Depreciation:

| | | | | | |
|----------------------------|---------|---------|---------|---------|-------|
| Cost of Revenue | \$1,904 | \$2,030 | \$1,800 | \$1,303 | \$455 |
| General and administrative | 712 | 657 | 452 | 987 | 348 |
| Total | \$2,616 | \$2,687 | \$2,252 | \$2,290 | \$803 |

Year Ended December 31,
2017 2016 2015 2014 2013
(dollars in thousands)

Amortization:

| | | | | | |
|----------------------------|---------|---------|---------|---------|---------|
| Cost of Revenue | \$3,512 | \$2,473 | \$2,116 | \$1,844 | \$1,185 |
| General and administrative | 5,786 | 4,634 | 4,083 | 3,323 | 3,322 |
| Total | \$9,298 | \$7,107 | \$6,199 | \$5,167 | \$4,507 |

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

You should read the following discussion of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. The following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Item 1A: "Risk Factors."

This section and other parts of this Annual Report on Form 10-K contain forward-looking statements that involve risks and uncertainties. Forward-looking statements may be identified by the use of forward-looking words such as "anticipate," "believe," "may," "will," "continue," "seek," "estimate," "intend," "hope," "predict," "could," "should," "would," "expect" or the negative or plural of these words or similar expressions, although not all forward-looking statements contain these words. Forward-looking statements are not guarantees of future performance and our actual results may differ significantly from the results discussed in the

forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in the subsection entitled Item 1A: “Risk Factors” above, which are incorporated herein by reference. The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included in Item 8: “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K. All information presented herein is based on our fiscal calendar. Unless otherwise stated, references in this report to particular years or quarters refer to our fiscal years ended December 31 and the associated quarters of those fiscal years. We assume no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Overview

We provide cloud-based enterprise work management software. We define enterprise work management software as software applications that enable organizations to plan, manage and execute projects and work. Our family of applications enables users to manage their projects, professional workforce and IT investments, automate document-intensive business processes, and effectively engage with their customers, prospects, and community via the web and mobile technologies.

The continued growth of an information-based economy has given rise to a large and growing group of knowledge workers who operate in dynamic work environments as part of geographically dispersed and virtual teams. We believe that manual processes and legacy on-premise enterprise systems are insufficient to address the needs of the modern work environment. In order for knowledge workers to be successful, they need to interact with intuitive enterprise work systems in a collaborative way, including real-time access. Today, legacy processes and systems are being disrupted and replaced by cloud-based enterprise work management software that improves visibility, collaboration and productivity.

In response to these changes, we are providing organizations and their knowledge workers with software applications that better align resources with business objectives and increase visibility, governance, collaboration, quality of customer experience, and responsiveness to changes in the business environment. This results in increased work capacity, higher productivity, better execution, and greater levels of customer engagement. Our applications are easy-to-use, scalable, and offer real-time collaboration for knowledge workers distributed on a local or global scale. Our applications address enterprise work challenges in the following categories:

- **Project & Information Technology (IT) Management.** Enables users to manage their organization’s projects, professional workforce and IT costs.

- **Workflow Automation.** Enables users to streamline, optimize, automate and secure document-intensive workflow business processes across their enterprise and supply chain.

- **Digital Engagement.** Enables users to effectively engage with their customers, prospects and community via the web and mobile technologies.

We sell our software applications primarily through a direct sales organization comprised of inside sales and field sales personnel. In addition to our direct sales organization, we have an indirect sales organization, which sells to distributors and value-added resellers. We employ a land-and-expand go-to-market strategy. After we demonstrate the value of an initial application to a customer, our sales and account management teams work to expand the adoption of that initial application across the customer, as well as cross-sell additional applications to address other enterprise work management needs of the customer. Our customer success organization supports our direct sales efforts by managing the post-sale customer lifecycle.

Our subscription agreements are typically sold either on a per-seat basis or on a minimum contracted volume basis with overage fees billed in arrears, depending on the application being sold. We service customers ranging from large global corporations and government agencies to small- and medium-sized businesses. We have more than 4,000 customers with over 450,000 users across a broad range of industries, including financial services, retail, technology, manufacturing, legal, education, consumer goods, media, telecommunications, government, non-profit, food and beverage, healthcare and life sciences.

Through a series of acquisitions and integrations, we have established a diverse family of software applications under the Upland brand and in three product categories (Project & IT Management, Workflow

Automation, and Digital Engagement), each of which addresses a specific enterprise work management need. Our revenue has grown from \$22.8 million in fiscal 2012 to \$98.0 million in fiscal 2017, representing a 330% period-over-period growth rate. See Note 13 Domestic and Foreign Operations, of the Notes to Consolidated Financial Statements for more information regarding our revenue as it relates to domestic and foreign operations.

Our operating results in a given period can fluctuate based on the mix of subscription and support, perpetual license and professional services revenue. For the years ended December 31, 2017, 2016 and 2015, our subscription and support revenue accounted for 87%, 88%, and 82%, respectively of our total revenue in both periods. Historically, we have sold certain of our applications under perpetual licenses, which also are paid in advance. For the years ended December 31, 2017, 2016 and 2015, our perpetual license revenue accounted for 4%, 2%, and 4% of our total revenue, respectively. The support agreements related to our perpetual licenses are one-year in duration and entitle the customer to support and unspecified upgrades. The revenue related to such support agreements is included as part of our subscription and support revenue. Professional services revenue consists of fees related to implementation, data extraction, integration and configuration and training on our applications. For the years ended December 31, 2017, 2016 and 2015, our professional services revenue accounted for 9%, 10%, and 14%, respectively.

To support continued growth, we intend to pursue acquisitions of complementary technologies, products and businesses. This will expand our product families, customer base, and market access, resulting in increased benefits of scale. We will prioritize acquisitions within our current core product categories, including Project & IT Management, Workflow Automation, and Digital Engagement. Consistent with our growth strategy, we have made a total of sixteen acquisitions in the six years ending December 31, 2017.

2017 Acquisitions

Omtool. On January 11, 2017, Upland completed its acquisition of Omtool, Ltd. ("Omtool"), an enterprise document capture, fax, and workflow solution company. The purchase price paid for Omtool was \$19.3 million (net of cash acquired).

RightAnswers. On April 21, 2017, the Company acquired RightAnswers, Inc. ("RightAnswers"), a cloud-based knowledge management system. The purchase price was \$17.4 million, in cash at closing (net of \$0.1 million cash acquired) and a \$2.5 million cash holdback payable in one year (subject to indemnification claims), and excludes potential future earn-out payments valued at \$4.0 million tied to additional performance-based goals, towards which \$1.0 million was paid in September, 2017 and an additional \$2.0 million was earned but not paid as of December 31, 2017. Revenues recorded since the acquisition date through December 31, 2017 were approximately \$5.6 million.

Waterfall. On July 13, 2017, the Company acquired Waterfall International Inc. ("Waterfall"), a cloud-based mobile messaging platform. The purchase price consideration paid was approximately \$24.4 million in cash at closing (net of \$0.4 million of cash acquired) and a \$1.5 million cash holdback payable in 18 months (subject to indemnification claims). The foregoing excludes an additional potential \$3.0 million in earnout payments tied to performance-based conditions.

Qvidian. On November 16, 2017, the Company acquired Qvidian Corporation ("Qvidian"), a provider of cloud-based RFP and sales-proposal automation software. The purchase price consideration paid by the Company was \$50 million, of which \$30 million came from cash on-hand and \$20 million from the Company's credit facility.

2016 Acquisitions

LeadLander. On January 7, 2016, Upland completed its purchase of substantially all of the assets of LeadLander, Inc. ("LeadLander"), a website analytics provider. The purchase price consideration paid was approximately \$8.0 million in cash payable at closing (net of \$0.4 million of cash acquired) and a \$1.2 million cash holdback payable in 12 months (subject to indemnification claims). In addition to the cash consideration described above, the Asset Purchase Agreement included a contingent share consideration component pursuant to which Upland issued an aggregate of \$2.4 million in common stock on July 25, 2016. The Company also paid additional consideration of \$2.4 million in March, 2017 in cash to the selling shareholders of LeadLander based on the achievement of certain revenue targets during fiscal years 2016 and 2017 and no further payment are expected to be made as of December 31, 2017.

HipCricket. On March 14, 2016, Upland completed its purchase of substantially all of the assets of HipCricket, Inc. ("HipCricket"), a cloud-based mobile messaging software provider. The consideration paid to the seller consisted of our issuance of one million shares of our common stock and the transfer of our EPM Live product business. The value of the shares on the closing date of the transaction was approximately \$5.7 million, and the fair value of our EPM Live product business was approximately \$5.9 million. Prior to the transaction, HipCricket was owned by an affiliate of ESW Capital, LLC, which is a shareholder of Upland. Raymond James & Co. provided a fairness opinion to Upland in connection with the transaction.

Advanced Processing & Imaging. On April 27, 2016, Upland acquired Advanced Processing & Imaging, Inc., a content management platform driving workflow in governments and schools. The purchase price consideration consisted of \$4.0 million in cash payable at closing (net of \$0.2 million of cash acquired), and a \$0.8 million cash holdback payable in 12 months (subject to indemnification claims).

2015 Acquisitions

Ultriva. On November 13, 2015, the Company acquired 100% of the outstanding capital of Ultriva, Inc. ("Ultriva") for total purchase consideration of \$7.2 million, which included cash of \$5.6 million, net of \$0.4 million of cash acquired, 179,298 shares of the Company's common stock with a fair value of \$1.4 million, and an additional \$200,000 in shares of common stock held in escrow, subject to indemnification claims, one year from the date of the acquisition. In November 2016, the Company issued 24,587 shares of common stock valued at approximately \$200,000 as a result of the escrow release. Ultriva provides cloud-based supply chain collaboration software.

Our acquisitions may have a material adverse impact on our results of operations, including a potential material adverse impact on our cost of revenue in the short term, as we seek to integrate our acquired businesses over the following six to twelve months in order to achieve additional operating efficiencies. In addition, as we grow our business, we continue to face many challenges and risks. We might encounter difficulties identifying, acquiring, and integrating complementary products, technologies, and businesses. Over time, as competition increases, we may experience pricing pressure. We also may experience seat downgrades or a reduction in minimum contracted volume that could negatively impact our business. Seat downgrades or reductions in minimum contracted volume could occur for several reasons, including dissatisfaction with our prices or features relative to competitive offerings, reductions in our customers' spending levels, unused seats or minimum contracted volume, or limited adoption by our customers of our applications. Our strategic initiatives will require expenditure of capital and the attention of management, and we may not succeed in executing on our growth plan.

Key Metrics

In addition to the GAAP financial measures described below in “Components of Operating Results,” we regularly review the following key metrics to evaluate and identify trends in our business, measure our performance, prepare financial projections and make strategic decisions (in thousands of dollars, except %):

| | Year Ended December 31, | | | | |
|---|-------------------------|----------|----------|----------|----------|
| | 2017 | 2016 | 2015 | 2014 | 2013 |
| Other Financial Data: | | | | | |
| Annualized recurring revenue value at year-end ⁽¹⁾ | \$106,099 | \$63,968 | \$58,918 | \$56,800 | \$49,061 |
| Annual net dollar retention rate ⁽²⁾ | 93 | % 95 | % 90 | % 96 | % 90 |
| Adjusted EBITDA ⁽³⁾ | \$30,316 | \$12,616 | \$4,143 | \$4,213 | \$3,576 |

(1) Annualized recurring revenue value at year-end. The value as of December 31 equals the monthly value of our recurring revenue contracts measured as of December 31 multiplied by 12. This measure excludes the revenue value of uncontracted overage fees and on-demand service fees. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Key Metrics” for additional discussion of this key metric.

(2) Annual net dollar retention rate. We define annual net dollar retention rate as of December 31 as the aggregate annualized recurring revenue value at December 31 from those customers that were also customers as of December 31 of the prior fiscal year, divided by the aggregate annualized recurring revenue value from all customers as of December 31 of the prior fiscal year. This measure excludes the revenue value of uncontracted overage fees and on-demand service fees. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Key Metrics” for additional discussion of this key metric.

(3) Adjusted EBITDA. We monitor our Adjusted EBITDA to help us evaluate the effectiveness and efficiency of our operations. Adjusted EBITDA is a non-GAAP financial measure. We define Adjusted EBITDA as net income (loss), calculated in accordance with GAAP, plus net income (loss) from discontinued operations, depreciation and amortization expense, interest expense, net, other expense (income), net, provision for income taxes, stock-based compensation expense, acquisition-related expenses, non-recurring litigation costs, and purchase accounting adjustments for deferred revenue. Prior to the filing of this Annual Report on Form 10-K, we did not include purchase accounting adjustments for deferred revenue as a component of Adjusted EBITDA, and as such, the prior year Adjusted EBITDA amounts presented herein have been recast to reflect the inclusion of purchase accounting adjustments for deferred revenue.

(4) Major Account. Upland defines major accounts as accounts with greater than or equal to \$25,000 in annual recurring revenue.

The following table presents a reconciliation of net loss from continuing operations, the most comparable GAAP measure, to Adjusted EBITDA for each of the periods indicated (in thousands).

| | Year Ended December 31, | | | | |
|---|-------------------------|------------|------------|------------|-----------|
| | 2017 | 2016 | 2015 | 2014 | 2013 |
| Net loss | \$(18,725) | \$(13,513) | \$(13,664) | \$(20,117) | \$(9,197) |
| Income (loss) from discontinued operations | — | — | — | — | 642 |
| Depreciation and amortization expense | 11,914 | 9,794 | 8,451 | 7,457 | 5,310 |
| Interest expense, net | 6,582 | 2,781 | 1,858 | 1,951 | 2,797 |
| Other expense (income), net | (289) |) 678 | 544 | (101) |) 431 |
| Provision for income taxes | 1,296 | 1,530 | 1,039 | (78) |) 708 |
| Stock-based compensation expense | 9,977 | 4,333 | 2,741 | 1,077 | 498 |
| Acquisition-related expense | 15,092 | 5,583 | 2,455 | 2,186 | 1,461 |
| Stock-based compensation expense - related party vendor | — | — | — | 11,220 | — |
| Non-recurring litigation costs | — | 25 | 406 | 256 | — |
| Purchase accounting deferred revenue discount | 4,469 | 1,405 | 313 | 362 | 926 |
| Adjusted EBITDA | \$30,316 | \$12,616 | \$4,143 | \$4,213 | \$3,576 |

We believe that Adjusted EBITDA provides useful information to management, investors and others in understanding and evaluating our operating results for the following reasons:

Adjusted EBITDA is widely used by investors and securities analysts to measure a company's operating performance without regard to items that can vary substantially from company to company depending upon their financing, capital structures and the method by which assets were acquired;

our management uses Adjusted EBITDA in conjunction with GAAP financial measures for planning purposes, in the preparation of our annual operating budget, as a measure of our operating performance, to assess the effectiveness of our business strategies and to communicate with our board of directors concerning our financial performance because Adjusted EBITDA eliminates the impact of items that we do not consider indicative of our core operating performance;

- Adjusted EBITDA provides more consistency and comparability with our past financial performance, facilitates period-to-period comparisons of our operations and also facilitates comparisons with other companies, many of which use similar non-GAAP financial measures to supplement their GAAP results; and

Adjusted EBITDA should not be considered as an alternative to net loss or any other measure of financial performance calculated and presented in accordance with GAAP. The use of Adjusted EBITDA as an analytical tool has limitations such as:

- depreciation and amortization are non-cash charges, and the assets being depreciated or amortized will often have to be replaced in the future and Adjusted EBITDA does not reflect cash requirements for such replacements; however, much of the depreciation and amortization currently reflected relates to amortization of acquired intangible assets as a result of business combination purchase accounting adjustments, which will not need to be replaced in the future;

- Adjusted EBITDA may not reflect changes in, or cash requirements for, our working capital needs or contractual commitments;

- Adjusted EBITDA does not reflect the potentially dilutive impact of stock-based compensation;

- Adjusted EBITDA does not reflect interest or tax payments that could reduce cash available for use; and,

- other companies, including companies in our industry, might calculate Adjusted EBITDA or similarly titled measures differently, which reduces their usefulness as comparative measures.

Because of these limitations, you should consider Adjusted EBITDA together with other financial performance measures, including various cash flow metrics, net loss and our other GAAP results.

Components of Operating Results

Revenue

Subscription and support revenue. We derive our subscription revenue from fees paid to us by our customers for use of our cloud-based applications. We recognize the revenue associated with subscription agreements ratably over the term of the agreement, provided all criteria required for revenue recognition have been met. Our subscription agreements are typically one to three years.

Our support revenue consists of maintenance fees associated with our perpetual licenses and hosting fees paid to us by our customers. Typically, when purchasing a perpetual license, a customer also purchases maintenance for which we charge a fee, priced as a percentage of the perpetual license fee. Maintenance agreements include the right to support and unspecified upgrades. We recognize the revenue associated with maintenance ratably over the term of the contract. In limited instances, at the customer's option, we may host the software purchased by a customer under a perpetual license on systems at our third-party data centers.

Perpetual license revenue. Perpetual license revenue reflects the revenue recognized from sales of perpetual licenses to new customers and additional perpetual licenses to existing customers. We generally recognize the license fee portion of the arrangement up-front, provided all revenue recognition criteria are satisfied.

Professional services revenue. Professional services revenue consists of fees related to implementation, data extraction, integration and configuration and training on our applications. We generally recognize the revenue associated with these professional services on a time and materials basis as we deliver the services or provide training to our customers.

Cost of Revenue

Cost of product revenue. Cost of product revenue consists primarily of personnel and related costs of our customer success and cloud operations 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 applications. We expect that cost of revenues may increase in the future depending on the growth rate of our new customers and billings and our need to support the implementation, hosting and support of those new customers. We intend to continue to invest additional resources in expanding the delivery capability of our applications. As we add hosting infrastructure capacity and support personnel in advance of anticipated growth, our cost of product revenue will increase, and if such anticipated revenue growth does not occur, our product gross profit will be adversely affected both in terms of absolute dollars and as a percentage of total revenues in any particular quarterly or annual period. Our cost of product 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, and allocated overhead, as well as the costs of contracted third-party vendors and reimbursable expenses. As most of our personnel are employed on a full-time basis, our cost of professional services revenue is largely fixed in the short-term, while our professional services revenue may fluctuate, leading to fluctuations in professional services gross profit. We expect that cost of professional services as a percentage of total revenues could fluctuate from period to period depending on the growth of our professional services business, the timing of sales of applications, and any associated costs relating to the delivery of services. Our cost of professional services revenue is generally expensed as costs are incurred.

Operating Expenses

Our operating expenses are classified into six categories: sales and marketing, research and development, refundable Canadian tax credits, general and administrative, depreciation and amortization and acquisition-related expenses. For each category, other than refundable Canadian tax credits and depreciation and amortization, the largest expense component is personnel and related costs, which includes salaries, employee benefit costs, bonuses, commissions, stock-based compensation, and payroll taxes. Operating expenses also include allocated overhead costs for facilities, which are allocated to each department based on relative department headcount. Operating expenses are generally recognized as incurred.

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, stock-based compensation and allocated overhead, as well as costs of promotional events, corporate communications, online marketing, product marketing and other brand-building activities. We expense sales commissions when the initial customer contract is signed and upon any renewal as our obligation to pay a sales commission arises at these times. Sales and marketing expenses may fluctuate as a percentage of total revenues for a variety of reasons including due to the timing of such expenses, in any particular quarterly or annual period.

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, allocated overhead, and costs of certain third-party contractors. Research and development costs related to the development of our software applications are generally recognized as incurred. For example, we are parties to a technology services agreement pursuant to which we generally recognize expenses for services as they are received. See Note 14 Related Party Transactions, of the Notes to Consolidated Financial Statements for more information regarding how expenses under such agreement are recognized. We have devoted our product development efforts primarily to enhancing the functionality, and expanding the capabilities, of our applications.

Refundable Canadian tax credits. Investment tax credits are accounted for as a reduction of research and development costs. Credits are accrued in the year in which the research and development costs of the capital expenditures are incurred, provided that we are reasonably certain that the credits will be received. The investment tax credit must be examined and approved by the tax authorities, and it is possible that the amounts granted will differ from the amounts recorded.

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 staff, including salaries, benefits, bonuses, payroll taxes, stock-based compensation, allocated overhead, professional fees, and other corporate expenses. We have recently incurred, and expect to continue to incur, additional expenses as we grow our operations, including potentially higher legal, corporate insurance, accounting and auditing expenses, and the additional costs of enhancing and maintaining our internal control environment. General and administrative expenses may fluctuate as a percentage of revenue, and overtime we expect that general and administrative expenses will decrease as a percent of revenue due to operational efficiencies.

Depreciation and amortization. Depreciation and amortization expenses primarily consist of depreciation and amortization of acquired intangible assets as a result of business combination purchase accounting adjustments. The valuation of identifiable intangible assets reflects management's estimates based on, among other factors, use of established valuation methods. Customer relationships are valued using an income approach, which estimates fair value based on the earnings and cash flow capacity of the subject asset and are amortized over a seven to ten-year period. The value of the trade name intangibles are determined using a relief from royalty method, which estimates fair value based on the value the owner of the asset receives from not having to pay a royalty to use the asset and are amortized over mostly a three-year period. Developed technology is valued using a cost-to-recreate approach and is amortized over a four- to seven-year period.

Acquisition-related expenses. Acquisition-related expenses consist of one-time costs in connection with each of our acquisitions, including legal fees, accounting fees, financing fees, restructuring costs, integration costs, and other transactional fees and bonuses. We intend to continue executing our focused strategy of acquisitions to

enhance the features and functionality of our applications, expand our customer base, and provide access to new markets and increased benefits of scale.

Total Other Expense

Total other expense consists primarily of changes in the estimated fair value of our preferred stock warrant liabilities, amortization of deferred financing costs over the term of the related loan facility, revaluation of contingent consideration, and interest expense on outstanding debt, including amortization of debt discount and effect of beneficial conversion features in our convertible promissory notes payable.

Income Taxes

Because we have not generated domestic net income in any period to date, we have recorded a full valuation allowance against our domestic net deferred tax assets, exclusive of tax deductible goodwill. We have historically not recorded any material provision for federal or state income taxes, other than deferred taxes related to tax deductible goodwill and current taxes in certain separate company filing states. The balance of the tax provision for fiscal years ended December 31, 2017, 2016, and 2015, outside of tax deductible goodwill and current taxes in separate filing states, is related to foreign income taxes, primarily operations of our Canadian subsidiary. Realization of any of our domestic deferred tax assets depends upon future earnings, the timing and amount of which are uncertain. Based on analysis of acquired net operating losses, utilization of our net operating losses will be subject to annual limitations due to the ownership change rules under the Internal Revenue Code of 1986, as amended, or the Code, and similar state provisions. In the event we have subsequent changes in ownership, the availability of net operating losses and research and development credit carryovers could be further limited.

Results of Operations

Consolidated Statements of Operations Data

The following tables set forth our results of operations for the specified periods, as well as our results of operations for the specified periods as a percentage of revenue. The period-to-period comparisons of results of operations are not necessarily indicative of results for future periods (dollars in thousands, except share and per share data).

| | Year Ended December 31, | | | | | |
|---|-------------------------|--------------------|------------|--------------------|------------|--------------------|
| | 2017 | | 2016 | | 2015 | |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | Percent of Revenue |
| Revenue: | | | | | | |
| Subscription and support | \$85,467 | 87% | \$65,552 | 88% | \$57,193 | 82% |
| Perpetual license | 4,346 | 4% | 1,650 | 2% | 2,805 | 4% |
| Total product revenue | 89,813 | 91% | 67,202 | 90% | 59,998 | 86% |
| Professional services | 8,139 | 9% | 7,565 | 10% | 9,913 | 14% |
| Total revenue | 97,952 | 100% | 74,767 | 100% | 69,911 | 100% |
| Cost of revenue: | | | | | | |
| Subscription and support (1)(2) | 28,454 | 29% | 22,734 | 30% | 19,586 | 28% |
| Professional services | 5,193 | 5% | 4,831 | 7% | 7,085 | 10% |
| Total cost of revenue | 33,647 | 34% | 27,565 | 37% | 26,671 | 38% |
| Gross profit | 64,305 | 66% | 47,202 | 63% | 43,240 | 62% |
| Operating expenses: | | | | | | |
| Sales and marketing (1) | 15,307 | 16% | 12,160 | 16% | 12,965 | 19% |
| Research and development (1) | 15,795 | 16% | 14,919 | 20% | 15,778 | 23% |
| Refundable Canadian tax credits | (542) | (1)% | (513) | (1)% | (470) | (1)% |
| General and administrative (1) | 23,291 | 24% | 18,286 | 24% | 18,201 | 26% |
| Depreciation and amortization | 6,498 | 7% | 5,291 | 7% | 4,534 | 6% |
| Acquisition-related expenses | 15,092 | 15% | 5,583 | 9% | 2,455 | 3% |
| Total operating expenses | 75,441 | 77% | 55,726 | 75% | 53,463 | 76% |
| Loss from operations | (11,136) | (11)% | (8,524) | (12)% | (10,223) | (14)% |
| Other Expense: | | | | | | |
| Interest expense, net | (6,582) | (7)% | (2,781) | (4)% | (1,858) | (3)% |
| Other expense, net | 289 | 1% | (678) | (1)% | (544) | —% |
| Total other expense | (6,293) | (6)% | (3,459) | (5)% | (2,402) | (3)% |
| Loss before provision for income taxes | (17,429) | (17)% | (11,983) | (17)% | (12,625) | (17)% |
| Provision for income taxes | (1,296) | (2)% | (1,530) | (1)% | (1,039) | (3)% |
| Loss from continuing operations | (18,725) | (19)% | (13,513) | (18)% | (13,664) | (20)% |
| Income (loss) from discontinued operations | — | —% | — | —% | — | —% |
| Net loss | \$(18,725) | (19)% | \$(13,513) | (18)% | \$(13,664) | (20)% |
| Preferred stock dividends and accretion | — | —% | — | —% | — | —% |
| Net loss attributable to common stockholders (3) | \$(18,725) | (19)% | \$(13,513) | (18)% | \$(13,664) | (20)% |
| Net loss per common share: | | | | | | |
| Loss from continuing operations per common share, basic and diluted | \$(1.02) | | \$(0.82) | | \$(0.91) | |
| Weighted-average common shares outstanding, basic and diluted (3) | 18,411,247 | | 16,472,799 | | 14,939,601 | |

(1) Includes stock-based compensation.

(2) Includes depreciation and amortization of \$5,416,000, \$4,503,000, and \$3,916,000 in 2017, 2016, and 2015, respectively.

See Note 8 Net Loss Per Share, of the Notes to Consolidated Financial Statements included elsewhere in this 10-K (3) for a discussion and reconciliation of historical net loss attributable to common stockholders and weighted average shares outstanding for historical basic and diluted net loss per share calculations.

Comparison of Fiscal Years Ended December 31, 2017 and December 31, 2016

Revenue

| | Year Ended December 31, | | | | Change | |
|--------------------------|-------------------------|--------------------|----------|--------------------|----------|----------|
| | 2017 | 2016 | 2017 | 2016 | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Revenue: | | | | | | |
| Subscription and support | \$85,467 | 87% | \$65,552 | 88% | \$19,915 | 30% |
| Perpetual license | 4,346 | 4% | 1,650 | 2% | 2,696 | 163% |
| Total product revenue | 89,813 | 91% | 67,202 | 90% | 22,611 | 34% |
| Professional services | 8,139 | 9% | 7,565 | 10% | 574 | 8% |
| Total revenue | \$97,952 | 100% | \$74,767 | 100% | \$23,185 | 31% |

Total revenue was \$98.0 million in 2017, compared to \$74.8 million in 2016, an increase of \$23.2 million, or 31%. Of the increase in total revenue, \$23.6 million was due to the acquisitions we closed in 2017 and 2016. Total revenue declined by \$0.8 million due to the divestiture of the EPM Live product line at the end of February 2016 and increased by \$0.4 million from organic total revenues, or 1% in 2017 compared to 2016.

Subscription and support revenue was \$85.5 million in 2017, compared to \$65.6 million in 2016, an increase of \$19.9 million, or 30%. Of the increase in subscription and support revenue, \$19.1 million was due to the acquisitions we closed in 2017 and 2016. Subscription and support revenue declined by \$0.5 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic subscription and support revenue increased by \$1.3 million, or 2%.

Perpetual license revenue was \$4.3 million in 2017, compared to \$1.7 million in 2016, an increase of \$2.7 million, or 163%. The acquisitions we closed in 2017 and 2016 contributed a \$2.9 million increase in perpetual license revenue. Perpetual license revenue declined by \$0.1 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic perpetual revenue declined by \$0.1 million, or 8%.

Professional services revenue was \$8.1 million in 2017, compared to \$7.6 million in 2016, an increase of \$0.6 million, or 8%. The acquisitions we closed in 2017 and 2016 contributed a \$1.6 million increase to professional services revenue. Professional services revenue declined by \$0.2 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic professional services revenue declined by \$0.8, or 11%.

Cost of Revenue and Gross Profit Percentage

| | Year Ended December 31, | | 2016 | | Change | |
|---|-------------------------|--------------------|----------|--------------------|----------|----------|
| | 2017 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Cost of revenue: | | | | | | |
| Subscription and support ⁽¹⁾ | \$28,454 | 29% | \$22,734 | 30% | \$5,720 | 25% |
| Professional services | 5,193 | 5% | 4,831 | 7% | 362 | 7% |
| Total cost of revenue | 33,647 | 34% | 27,565 | 37% | 6,082 | 22% |
| Gross profit | \$64,305 | 66% | \$47,202 | 63% | \$17,103 | 36% |

⁽¹⁾ Includes depreciation and amortization expense as follows:

| | | | | | | |
|--------------|---------|----|---------|----|---------|------|
| Depreciation | \$1,904 | 2% | \$2,030 | 3% | \$(126) | (6)% |
| Amortization | \$3,512 | 4% | \$2,473 | 3% | \$1,039 | 42% |

Cost of subscription and support revenue was \$28.5 million in 2017, compared to \$22.7 million in 2016, an increase of \$5.7 million, or 25%. The 2017 and 2016 acquisitions contributed to a \$6.5 million increase in cost of subscription and support revenue. Of the \$6.5 million increase, \$2.4 million was due to mobile messaging costs associated with the Waterfall acquisition, \$1.5 million increase in personnel and related costs, \$1.1 million increase in depreciation and amortization costs, \$0.5 million was due to cloud hosting and infrastructure, \$0.4 million was due to third party software and equipment costs, and the remaining \$0.6 million from miscellaneous costs. The divestiture of the EPM Live product line in Q1 2016 contributed to \$0.3 million decrease in cost of subscription and support revenue, which was driven by a \$0.1 million decrease to personnel and related costs, \$0.1 million from depreciation and amortization, and \$0.1 million from reduced third party software and equipment costs. The organic portion of our business contributed to a \$0.5 million decrease, related to personnel and related costs, most of which were the result of our planned operating efficiencies.

Cost of professional services revenue was \$5.2 million in 2017, compared to \$4.8 million in 2016, an increase of \$0.4 million, or 7%. The acquisitions we closed in 2017 and 2016 contributed a \$1.3 million increase in cost of professional services revenue. Of the \$1.3 million increase, \$1.2 million was attributable to personnel and related costs and \$0.1 million is attributable to contractor fees. The divestiture of the EPM Live product line at the end of February 2016 contributed to \$0.3 million decrease in cost of professional services, which was attributable to reduced personnel and related costs. Cost of professional services revenue for organic business decreased \$0.6 million driven by a \$0.3 million reduction in personnel and related costs, \$0.2 million attributable to the reduction of contractor fees and a \$0.1 million reduction in miscellaneous expenses, most of which are the result of our planned operating efficiencies.

Operating Expenses

Sales and Marketing Expense

| | Year Ended December 31, | | 2016 | | Change | |
|---------------------|-------------------------|--------------------|----------|--------------------|---------|----------|
| | 2017 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Sales and marketing | \$15,307 | 16% | \$12,160 | 16% | \$3,147 | 26% |

Sales and marketing expense was \$15.3 million in 2017, compared to \$12.2 million in 2016, an increase of \$3.1 million, or 26%. The acquisitions we closed in 2017 and 2016 contributed an increase of \$4.4 million in sales and marketing expense comprised of \$2.3 million of personnel and related costs, \$1.4 million of commission expense, \$0.3 million of increased general marketing spend, and the remaining \$0.4 million was driven by

miscellaneous costs. The divestiture of the EPM Live product line in Q1 2016 contributed to a decrease of \$0.1 million in sales and marketing expense comprised of personnel and related expenses. The organic business contributed a \$1.1 million decrease to sales and marketing expense, which was attributable primarily to a decrease in commission expense of \$0.7 million and marketing program expenses of \$0.4 million.

Research and Development Expense

| | Year Ended December 31, | | | | Change | |
|---------------------------------|-------------------------|------|----------|--------------------|------------------------|----------|
| | 2017 | 2016 | Amount | Percent of Revenue | Amount | % Change |
| | | | | | (dollars in thousands) | |
| Research and development: | | | | | | |
| Research and development | \$15,795 | 16% | \$14,919 | 20% | \$876 | 6% |
| Refundable Canadian tax credits | (542) | —% | (513) | (1)% | (29) | 6% |
| Total research and development | \$15,253 | 16% | \$14,406 | 19% | \$847 | 6% |

Research and development expense was \$15.8 million in 2017, compared to \$14.9 million in 2016, an increase of \$0.9 million, or 6%. The \$2.6 million increase from acquisitions closed in 2017 and 2016 was comprised of \$2.0 million in personnel and related costs, \$0.3 million in contractor fees, and \$0.3 million of miscellaneous expenses. The divestiture of the EPM Live product in February 2016 contributed a decrease of \$0.2 million in research and development expense comprised of \$0.1 million of personnel and related costs and \$0.1 million of contractor fees. The organic portion of our business contributed to a \$1.5 million decrease in research and development costs from reduced personnel and related costs as a result of our planned operating efficiencies.

Refundable Canadian tax credits were \$0.5 million in 2017, or flat compared to \$0.5 million in 2016.

General and Administrative Expense

| | Year Ended December 31, | | | | Change | |
|----------------------------|-------------------------|------|----------|--------------------|------------------------|----------|
| | 2017 | 2016 | Amount | Percent of Revenue | Amount | % Change |
| | | | | | (dollars in thousands) | |
| General and administrative | \$23,291 | 24% | \$18,286 | 24% | \$5,005 | 27% |

General and administrative expense was \$23.3 million in 2017, compared to \$18.3 million in 2016, an increase of \$5.0 million, or 27%. The acquisitions we closed in 2017 and 2016 contributed a \$0.6 million dollar increase to general and administrative expense, which \$0.6 million was related to personnel and related expense, which were the result of our planned operating efficiencies. The divestiture of the EPM Live product in February 2016 contributed had minimal impact in general and administrative expense. General and administrative costs for the organic portion of our business increased by \$4.4 million which was primarily related to an increase in non-cash stock compensation expense.

Depreciation and Amortization Expense

| | Year Ended December 31, | | 2016 | | Change | |
|-------------------------------------|-------------------------|--------------------|---------|--------------------|---------|----------|
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Depreciation and amortization: | | | | | | |
| Depreciation | \$712 | 1% | \$657 | 1% | \$55 | 8% |
| Amortization | 5,786 | 6% | 4,634 | 6% | 1,152 | 25% |
| Total depreciation and amortization | \$6,498 | 7% | \$5,291 | 7% | \$1,207 | 23% |

Depreciation and amortization expense was \$6.5 million in 2017, compared to \$5.3 million in 2016, an increase of \$1.2 million, or 23%. The acquisitions we closed in 2017 and 2016 contributed a \$2.3 million increase with the majority resulting from amortization of acquired intangible assets created from our purchase business combinations accounting. The organic portion of our business saw a \$1.1 million decrease in depreciation and amortization cost primarily due to a decrease in amortization expense of acquired intangible assets created from our purchase business combinations accounting. This divestiture of the EPM Live product in February 2016 did not have a significant impact to depreciation and amortization expense.

Acquisition-related Expense

| | Year Ended December 31, | | 2016 | | Change | |
|-----------------------------|-------------------------|--------------------|---------|--------------------|---------|----------|
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Acquisition-related expense | \$15,092 | 15% | \$5,583 | 7% | \$9,509 | 170% |

One-time acquisition-related expense was \$15.1 million in 2017, compared to \$5.6 million in 2016, an increase of \$9.5 million, or 170%. The Company made four acquisitions during 2017, this acquisition activity was substantially more than the three acquisitions closed in 2016. As a result, year-over-year comparisons of these expenses are not necessarily meaningful due to their one-time nature.

Other Expense, net

| | Year Ended December 31, | | Change | |
|-----------------------------|-------------------------|--------------------|-----------|----------|
| | 2017 | 2016 | Amount | % Change |
| | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | |
| Other Expense: | | | | |
| Interest expense, net | \$(6,582) | (7)% | \$(2,781) | (4)% |
| Other income (expense), net | 289 | 1% | (678) | (1)% |
| Total other expense | \$(6,293) | (6)% | \$(3,459) | (5)% |

Interest expense was \$6.6 million in 2017, compared to \$2.8 million for 2016, an increase of \$3.8 million, or 137%.

The increase is attributable to increased borrowing under our expanded debt facility to support acquisitions.

Other income was \$0.3 million in 2017, compared to other expense of \$0.7 million in 2016, a decrease of \$1.0 million, or 143%. The decrease in expenses was driven by the loss on the sale of EPM Live of \$0.7 million in the first quarter of 2016.

(Provision for) Benefit from Income Taxes

| | Year Ended December 31, | | Change | |
|---|-------------------------|--------------------|-----------|----------|
| | 2017 | 2016 | Amount | % Change |
| | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | |
| (Provision for) Benefit from Income Taxes | \$(1,296) | (1)% | \$(1,530) | (2)% |

Provision for income taxes was \$1.3 million in 2017, compared to \$1.5 million in 2016, an decrease in provision for income taxes of \$0.2 million, or 15%. In 2017 we recorded income taxes that were principally attributable to state and foreign taxes, other than deferred taxes related to tax deductible goodwill. The foreign provision for income taxes in 2017 is principally attributable to net income generated in Canada after reduction for tax credits generated and carried forward. Because we have not generated domestic net income in any period to date, we have recorded a full valuation allowance against our domestic net deferred tax assets, exclusive of tax deductible goodwill. Realization of any of our domestic deferred tax assets depends upon future earnings, the timing and amount of which are uncertain. Based on analysis of acquired net operating losses, utilization of our net operating losses will be subject to annual limitations due to the ownership change rules under the Code and similar state provisions. In the event we have subsequent changes in ownership, the availability of net operating losses and research and development credit carryovers could be further limited. See Note 6 Income Taxes, of the Notes to Consolidated Financial Statements for more information regarding our income taxes as they relate to foreign and domestic operations.

Comparison of Fiscal Years Ended December 31, 2016 and December 31, 2015

Revenue

| | Year Ended December 31, 2016 | | 2015 | | Change | |
|--------------------------|---------------------------------|--------------------|----------|--------------------|----------|----------|
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Revenue: | | | | | | |
| Subscription and support | \$65,552 | 88% | \$57,193 | 82% | \$8,359 | 15% |
| Perpetual license | 1,650 | 2% | 2,805 | 4% | (1,155) | (41)% |
| Total product revenue | 67,202 | 90% | 59,998 | 86% | 7,204 | 12% |
| Professional services | 7,565 | 10% | 9,913 | 14% | (2,348) | (24)% |
| Total revenue | \$74,767 | 100% | \$69,911 | 100% | \$4,856 | 7% |

Total revenue was \$74.8 million in 2016, compared to \$69.9 million in 2015, an increase of \$4.9 million, or 7%. Of the increase in total revenue, \$11.7 million was due to the acquisitions we closed in 2015 and 2016. Total revenue also declined by \$6.0 million due to the divestiture of the EPM Live product line at the end of February 2016 and by \$0.7 million from organic total revenues, or 1% in 2016 compared to 2015 due the change in the foreign currency exchange rate between the Canadian dollar versus the U.S. dollar for those periods of \$0.6 million. Therefore, on a constant currency basis, our organic total revenue decreased by \$0.1 million.

Subscription and support revenue was \$65.6 million in 2016, compared to \$57.2 million in 2015, an increase of \$8.4 million, or 15%. Of the increase in subscription and support revenue, \$10.6 million was due to the acquisitions we closed in 2015 and 2016. Subscription and support revenue declined by \$2.9 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic subscription and support revenue increased by \$0.7 million, which includes a negative impact of \$0.6 million in 2016 compared to 2015 due to the change in the foreign currency exchange rate between the Canadian dollar versus the U.S. dollar. Therefore, on a constant currency basis, our organic subscription and support revenue increased by \$1.3 million, or 2%.

Perpetual license revenue was \$1.7 million in 2016, compared to \$2.8 million in 2015, a decrease of \$1.1 million, or 41%. The acquisitions we closed in 2015 and 2016 contributed a \$0.1 million increase in perpetual license revenue. Perpetual license revenue declined by \$0.6 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic perpetual revenue declined by \$0.6 million, or 2% with an immaterial impact from changes in the foreign currency exchange rate between the Canadian dollar versus the U.S. dollar on perpetual license revenue.

Professional services revenue was \$7.6 million in 2016, compared to \$9.9 million in 2015, a decrease of \$2.3 million, or 24%. The acquisitions we closed in 2015 and 2016 contributed a \$1.0 million increase to professional services revenue. Professional services revenue declined by \$2.5 million due to the divestiture of the EPM Live product line at the end of February 2016. The organic professional services revenue declined by \$0.8 million which included a decline of \$0.1 million due to the change in the foreign currency exchange rate between the Canadian dollar versus the U.S. dollar in 2016 compared to 2015. Therefore, on a constant currency basis, our organic professional services revenue decreased by \$0.7 million, or 7%.

Cost of Revenue and Gross Profit Percentage

| | Year Ended December 31, | | 2015 | | Change | |
|---|-------------------------|--------------------|----------|--------------------|----------|----------|
| | 2016 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Cost of revenue: | | | | | | |
| Subscription and support ⁽¹⁾ | \$22,734 | 30% | \$19,586 | 28% | \$3,148 | 16% |
| Professional services | 4,831 | 7% | 7,085 | 10% | (2,254) | (32)% |
| Total cost of revenue | 27,565 | 37% | 26,671 | 38% | 894 | 3% |
| Gross profit | \$47,202 | 63% | \$43,240 | 62% | \$3,962 | 9% |

⁽¹⁾ Includes depreciation and amortization expense as follows:

| | | | | | | |
|--------------|---------|----|---------|----|-------|-----|
| Depreciation | \$2,030 | 3% | \$1,800 | 3% | \$230 | 13% |
| Amortization | \$2,473 | 3% | \$2,116 | 3% | \$357 | 17% |

Cost of subscription and support revenue was \$22.7 million in 2016, compared to \$19.6 million in 2015, an increase of \$3.1 million, or 16%. The organic portion of our business contributed to a \$3.8 million increase. Of the \$3.8 million increase, \$3.5 million was due to mobile messaging and short code leasing costs driven by higher mobile messaging volume and activity with the remaining \$0.3 million increase from one-time charges related to the remaining unused portion of certain data center contracts as our cloud infrastructure was consolidated. The divestiture of the EPM Live product line in Q1 2016 contributed to \$1.7 million decrease in cost of subscription and support revenue. Of the \$1.7 million decrease, \$0.7 million was attributable to reduced personnel and related costs, \$0.2 million from depreciation and amortization, \$0.2 million from reduced third party software and equipment costs and the remaining \$0.2 million from miscellaneous costs. The 2015 and 2016 acquisitions contributed to a \$1.2 million increase in cost of subscription and support revenue. Of the \$1.2 million increase, \$0.4 million was due to higher amortization of intangibles, \$0.4 million increase in personnel and related costs, \$0.3 million increase in data center and hosting costs and the remaining \$0.2 million from miscellaneous costs.

Cost of professional services revenue was \$4.8 million in 2016, compared to \$7.1 million in 2015, a decrease of \$2.3 million, or 32%. Cost of professional services revenue for organic business decreased \$1.0 million driven by a \$0.7 million reduction in personnel and related costs, \$0.2 million reduction in contractor fees and \$0.1 million reduction in miscellaneous costs which are the result of our planned operating efficiencies. The divestiture of the EPM Live product line at the end of February 2016 contributed to \$1.8 million decrease in cost. Of the \$1.8 million decrease, \$1.4 million was attributable to reduced personnel and related costs, \$0.2 million from reduced facility expenses and \$0.3 million from miscellaneous costs. The acquisitions we closed in 2015 and 2016 contributed a \$0.6 million increase in cost of professional services revenue. Of the \$0.6 million increase, \$0.3 million was attributable to personnel and related costs, \$0.1 million attributable to contractor fees, and \$0.2 million attributable to miscellaneous costs.

Operating Expenses

Sales and Marketing Expense

| | Year Ended December 31, | | 2015 | | Change | |
|---------------------|-------------------------|--------------------|----------|--------------------|---------|----------|
| | 2016 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Sales and marketing | \$12,160 | 16% | \$12,965 | 19% | \$(805) | (6)% |

Sales and marketing expense was \$12.2 million in 2016, compared to \$13.0 million in 2015, a decrease of \$0.8 million, or 6%. Of the decrease in sales and marketing expense, \$1.5 million was attributable to the organic

business primarily due to a decrease in sales and solution consultant personnel and related cost of \$1.2 million which is the result of our planned operating efficiencies, and reduced spend of \$0.3 million for general marketing. The divestiture of the EPM Live product line in Q1 2016 contributed to a decrease of \$1.4 million in sales and marketing expense comprised of \$0.5 million reduction in personnel and related expenses, \$0.3 million of bad debt, \$0.2 million of commissions, \$0.2 million of marketing program spend and \$0.3 million of miscellaneous expenses. The acquisitions we closed in 2015 and 2016 contributed an increase of \$2.1 million in sales and marketing expense comprised of \$1.4 million of sales commission, \$0.4 million of personnel and related costs, and \$0.4 million of miscellaneous expenses.

Research and Development Expense

| | Year Ended December 31, | | 2015 | | Change | |
|--|-------------------------|--------------------|--------|--------------------|--------|----------|
| | 2016 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |

(dollars in thousands)

Research and development:

| | | | | | | |
|---------------------------------|----------|------|----------|------|---------|------|
| Research and development | \$14,919 | 20% | \$15,778 | 23% | \$(859) | (5)% |
| Refundable Canadian tax credits | (513) | (1)% | (470) | (1)% | (43) | 9% |
| Total research and development | \$14,406 | 19% | \$15,308 | 22% | \$(902) | (6)% |

Research and development expense was \$14.9 million in 2016, compared to \$15.8 million in 2015, a decrease of \$0.9 million, or 5%. The organic portion of our business contributed to a \$0.9 million decrease in research and development costs from reduced personnel and related costs as a result of our planned operating efficiencies. The divestiture of the EPM Live product in February 2016 contributed a decrease of \$0.9 million in research and development expense comprised of \$0.6 million of personnel and related costs and \$0.3 million of contractor fees. The \$0.9 million reduction in research and development from the divestiture of the EPM Live product line was offset by \$0.9 million increase in research and development from the acquisitions we closed in 2015 and 2016. This increase from acquisitions was comprised of \$0.6 million in personnel and related costs, \$0.1 million in contractor fees, and \$0.2 million of miscellaneous expenses.

Refundable Canadian tax credits were \$0.5 million in 2016, or flat compared to \$0.5 million in 2015.

General and Administrative Expense

| | Year Ended December 31, | | 2015 | | Change | |
|--|-------------------------|--------------------|--------|--------------------|--------|----------|
| | 2016 | | Amount | Percent of Revenue | Amount | % Change |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |

(dollars in thousands)

| | | | | | | |
|----------------------------|----------|-----|----------|-----|------|----|
| General and administrative | \$18,286 | 24% | \$18,201 | 26% | \$85 | —% |
|----------------------------|----------|-----|----------|-----|------|----|

General and administrative expense was \$18.3 million in 2016, were flat compared to \$18.2 million in 2015. General and administrative costs for the organic portion of our business was flat and included increases due to a \$1.4 million increase in stock compensation expense and \$0.2 million from facility costs, related to costs of closure for office locations acquired in acquisitions, offset by decreases of \$0.5 million from lower use of third parties, \$0.5 million reductions in people-related costs, a \$0.4 million reduction in non-recurring litigation costs, and \$0.2 million from other factors. The divestiture of the EPM Live product in February 2016 contributed a decrease of \$0.3 million in general and administrative expense, which was offset by a \$0.3 million increase in general and administrative expense from the acquisitions we closed in 2015 and 2016.

Depreciation and Amortization Expense

| | Year Ended December 31, | | 2015 | | Change | | |
|-------------------------------------|-------------------------|--------|--------------------|--------|--------------------|--------|----------|
| | 2016 | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | | |
| Depreciation and amortization: | | | | | | | |
| Depreciation | \$657 | 1% | \$452 | 1% | \$205 | 45% | |
| Amortization | 4,634 | 6% | 4,082 | 6% | 552 | 14% | |
| Total depreciation and amortization | \$5,291 | 7% | \$4,534 | 7% | \$757 | 17% | |

Depreciation and amortization expense was \$5.3 million in 2016, compared to \$4.5 million in 2015, an increase of \$0.8 million, or 17%. The acquisitions we closed in 2015 and 2016 contributed a \$0.7 million increase with the majority resulting from amortization of acquired intangible assets created from our purchase business combinations. The organic businesses saw a \$0.5 million increase in depreciation primarily due to hardware and software additions. This increase was partially offset by a \$0.4 million decrease in depreciation and amortization from the divestiture of our EPM Live product in February 2016.

Acquisition-related Expense

| | Year Ended December 31, | | 2015 | | Change | | |
|-----------------------------|-------------------------|--------|--------------------|--------|--------------------|--------|----------|
| | 2016 | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | | |
| Acquisition-related expense | \$5,583 | 7% | \$2,455 | 4% | \$3,128 | 127% | |

One-time acquisition-related expense was \$5.6 million in 2016, compared to \$2.5 million in 2015, an increase of \$3.1 million, or 127%. The Company made three acquisitions during 2016 and signed a fourth acquisition in December 2016 which subsequently closed in January 2017. This acquisition activity was substantially more than the one acquisition closed in 2015. As a result, year-over-year comparisons of these expenses are not necessarily meaningful due to their one-time nature.

Other Expense, net

| | Year Ended December 31, 2016 | | 2015 | | Change | |
|-----------------------------|---------------------------------|--------------------|-----------|--------------------|-----------|----------|
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| Other Expense: | | | | | | |
| Interest expense, net | \$(2,781) | (4)% | \$(1,858) | (3)% | \$(923) | 50% |
| Other income (expense), net | (678) | (1)% | (544) | —% | (134) | 25% |
| Total other expense | \$(3,459) | (5)% | \$(2,402) | (3)% | \$(1,057) | 44% |

Interest expense was \$2.8 million in 2016, compared to \$1.9 million for 2014, an increase of \$0.9 million, or 50%.

The increase is attributable to increased borrowing under our expanded debt facility to support acquisitions.

Other expense was \$0.7 million in 2016, compared to other expense of \$0.5 million in 2015, an increase of \$0.1 million, or 25%. Increases in expense were a loss on the sale of EPM Live of \$0.7 million and a loss of \$0.2 million from asset retirements over the prior period, offset by a \$0.5 million gain associated with the reduction of earnout obligations to sellers and of \$0.2 million from foreign currency gains from non-base currency assets and liabilities.

(Provision for) Benefit from Income Taxes

| | Year Ended December 31, 2016 | | 2015 | | Change | |
|---|---------------------------------|--------------------|-----------|--------------------|---------|----------|
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | % Change |
| | (dollars in thousands) | | | | | |
| (Provision for) Benefit from Income Taxes | \$(1,530) | (2)% | \$(1,039) | (1)% | \$(491) | 47% |

Provision for income taxes was \$1.5 million in 2016, compared to \$1.0 million in 2015, an increase in provision for income taxes of \$0.5 million, or 47%. In 2016 we recorded income taxes that were principally attributable to state and foreign taxes, other than deferred taxes related to tax deductible goodwill. The foreign provision for income taxes in 2016 is attributable to net income generated in excess of net operating loss carryforwards and reduction of tax credit carryforwards in Canada. Because we have not generated domestic net income in any period to date, we have recorded a full valuation allowance against our domestic net deferred tax assets, exclusive of tax deductible goodwill.

Realization of any of our domestic deferred tax assets depends upon future earnings, the timing and amount of which are uncertain. Based on analysis of acquired net operating losses, utilization of our net operating losses will be subject to annual limitations due to the ownership change rules under the Code and similar state provisions. In the event we have subsequent changes in ownership, the availability of net operating losses and research and development credit carryovers could be further limited. See Note 6 Income Taxes, of the Notes to Consolidated Financial Statements for more information regarding our income taxes as they relate to foreign and domestic operations.

Liquidity and Capital Resources

To date, we have financed our operations primarily through capital raising including sales of our common stock, cash from operating activities, borrowing under our credit facility, and the issuance of notes to sellers in some of our acquisitions.

On May 12, 2017, the Company filed a registration statement on Form S-3 (File No. 333-217977) (the "S-3"), to register Upland securities in an aggregate amount of up to \$75.0 million for offerings from time to time. The S-3 was amended on May 22, 2017, and declared effective on May 26, 2017. On June 6, 2017, pursuant to the S-3, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Needham & Company, LLC and William Blair & Company, L.L.C., as representatives of the several underwriters named therein, relating to the sale and issuance of 2,139,534 common shares of the Company for an offering price to the public of \$21.50 per share. The net proceeds of the registered public offering were approximately \$42.7 million, net of issuance costs, in exchange for 2,139,534 shares of common stock.

As of December 31, 2017, we had cash and cash equivalents of \$22.3 million, \$30.0 million of available borrowings under our loan facility, and \$113.8 million of borrowings outstanding under our loan and security agreements, and \$49.4 million as of December 31, 2016.

Fifth Amendment to Credit Facility

On August 2, 2017, the Company entered into a credit facility with Wells Fargo Capital Finance and CIT Bank, N.A. as joint lead arrangers, and including Goldman Sachs Bank USA, Regions Bank, and Citizens Bank, N.A., with a Fifth Amendment to Credit Agreement (the "Fifth Amendment") that amends that certain Credit Agreement dated as of May 14, 2015 (the "Credit Facility") among inter alia the Company, certain of its subsidiaries, and each of the lenders named in the Credit Facility.

The Credit Facility now provides for a \$200.0 million credit facility, including a \$113.8 million outstanding term loan, a \$40.0 million delayed draw term loan commitment (\$20.0 million of which was drawn in conjunction with the acquisition of Qvidian in November, 2017), a \$10.0 million revolving loan commitment, and a \$55.0 million uncommitted accordion.

Specifically, the Fifth Amendment provides for, among other things, (i) the expansion of the Company's delayed draw term facility from \$10.0 million to \$40.0 million, (ii) an increase in the Company's uncommitted accordion amount from \$20.0 million to \$55.0 million, (iii) reduces principal installments to 2.5% per annum on or before June 30, 2019 with the existing 5.0% per annum due thereafter until the facility's maturity date of August 2, 2022, (iv) a favorable adjustment to the leverage ratio such that funded indebtedness used in the leverage ratio is reduced by qualified cash in excess of \$2.5 million, not to exceed \$15.0 million, and (v) an increase in the maximum amount of purchase consideration payable in respect of an individual permitted acquisition from \$20.0 million to \$25.0 million, and in respect of all permitted acquisitions from \$75.0 million to \$175.0 million.

As of December 31, 2017 and December 31, 2016, we had a working capital deficit of \$23.5 million and a surplus of \$7.6 million, respectively, which included \$43.8 million and \$23.6 million of deferred revenue recorded as a current liability as of December 31, 2017 and December 31, 2016, respectively. This deferred revenue will be recognized as revenue in accordance with our revenue recognition policy.

The following table summarizes our cash flows for the periods indicated (including cash flows from discontinued operations):

| | Year Ended December 31, | | |
|---|-------------------------|----------|-----------|
| | 2017 | 2016 | 2015 |
| | (dollars in thousands) | | |
| Consolidated Statements of Cash Flow Data: | | | |
| Net cash provided by (used in) operating activities | \$7,716 | \$3,875 | \$(1,503) |
| Net cash used in investing activities | (110,775) | (13,229) | (9,411) |
| Net cash provided by (used in) financing activities | 96,178 | 19,525 | (1,221) |
| Effect of exchange rate fluctuations on cash | 449 | 114 | (380) |
| Change in cash and cash equivalents | (6,432) | 10,285 | (12,515) |
| Cash and cash equivalents, beginning of period | 28,758 | 18,473 | 30,988 |
| Cash and cash equivalents, end of period | \$22,326 | \$28,758 | \$18,473 |

Cash Flows from Operating Activities

Cash used in operating activities is significantly influenced by the amount of cash we invest in personnel and infrastructure to support the anticipated growth of our business. Our operating assets and liabilities consist primarily of receivables from clients and unbilled professional services, accounts payable and accrued expenses and deferred revenues. The timing of our subscription and support billings, the volume of professional services rendered, the amount of perpetual licenses sold, and the related timing of collections on those bookings, as well as payments of our accounts payable and accrued payroll and related benefits affect these account balances.

Our cash provided by operating activities for the year ended 2017 primarily reflects our net loss of \$18.7 million, partially offset by non-cash expenses that included \$11.9 million of depreciation and amortization, \$0.3 million of deferred income taxes, \$0.6 million of non-cash interest expense, and \$10.0 million of non-cash stock compensation expense. Working capital sources of cash included a \$1.6 million decrease in Prepaids and other, a \$1.3 million increase in accounts payable, a \$3.7 million increase in accrued expenses and other liabilities and a \$2.8 million increase in deferred revenue. These sources of cash were partially offset by a \$4.7 million increase in accounts receivable.

Our cash provided by operating activities for the year ended 2016 primarily reflects our net loss of \$13.5 million, offset by non-cash expenses that included \$9.8 million of depreciation and amortization, \$0.5 million of deferred income taxes, \$0.1 million of foreign currency re-measurement loss, \$0.3 million of non-cash interest expense, and \$4.3 million of non-cash stock compensation expense. Working capital sources of cash included a \$0.4 million decrease in accounts receivable, a \$0.6 million decrease in prepaids and other assets, a \$0.4 million decrease in accrued expenses and other liabilities and a \$2.2 million decrease in deferred revenue. These sources of cash were offset by a \$0.4 million decrease in accounts receivable and a \$1.5 million increase in accounts payable.

Our cash provided by operating activities for the year ended 2015 primarily reflects our net loss of \$13.7 million, offset by non-cash expenses that included a \$0.0 million charge for the 1,803,574 shares of common stock issued to DevFactory, \$8.5 million of depreciation and amortization, \$0.4 million of non-cash interest expense, and \$2.7 million of non-cash stock compensation expense offset by \$0.2 million in deferred income tax benefit. Working capital sources of cash included a \$0.7 million decrease in accounts receivable, a \$1.9 million decrease in prepaids and other assets, and a \$0.2 million increase in accounts payable. These sources of cash were offset by a \$2.8 million decrease in accrued expenses and other liabilities, and a \$0.6 million decrease in deferred revenue.

Cash Flows from Investing Activities

Our primary investing activities have consisted of acquisitions of complementary technologies, products and businesses. As our business grows, we expect our primary investing activities to continue to further expand our family of software applications and infrastructure and support additional personnel. For fiscal 2017, 2016 and 2015, cash used in investing activities for business combinations consisted of \$110.3 million, \$12.2 million and \$7.7 million, respectively. In addition, for fiscal 2017, 2016 and 2015, we used \$0.4 million, \$0.7 million and \$1.0 million, respectively, for the purchases of property and equipment. Further, for fiscal 2017, 2016 and 2015, we used \$0.1 million, \$0.4 million, and \$0.8 million, respectively, for the purchases of customer relationships.

Cash Flows from Financing Activities

Our primary financing activities have consisted of capital raised to fund our operations as well as proceeds from debt obligations entered into to finance our operations. For fiscal 2017, cash provided by financing activities consisted primarily of \$74.5 million in proceeds from debt, partially offset by \$11.9 million for repayment of debt and \$43.8 million for proceeds from issuance of common stock, net of issuance costs. For fiscal 2016, cash provided by financing activities consisted primarily of \$31.0 million in proceeds from debt, partially offset by \$7.2 million for repayment of debt. For fiscal 2015, cash provided by financing activities consisted primarily of \$24.1 million in proceeds from debt, offset by \$23.9 million for repayment of debt. For fiscal 2017, 2016 and 2015 cash used for additional consideration to sellers of businesses was \$5.4 million, \$2.1 million, and \$0.4 million, respectively, and payments on capital leases was \$1.5 million, \$1.7 million, and \$1.0 million, respectively.

Loan and Security Agreements

See Note 7 - Debt, of the Notes to Consolidated Financial Statements for more information regarding our Loan and Security Agreements and outstanding debt as of December 31, 2017.

Contractual Payment Obligations

The following table summarizes our future contractual obligations as of December 31, 2017 (in thousands):

| Contractual Obligations | Payment Due by Period | | | | |
|-----------------------------|-----------------------|------------------|-----------|------------|-------------------|
| | Total | Less than 1 Year | 1-3 Years | >3-5 Years | More Than 5 Years |
| Debt Obligations | \$113,813 | \$3,000 | \$15,813 | \$95,000 | \$ — |
| Capital Lease Obligations | \$1,844 | \$1,150 | \$694 | \$— | \$ — |
| Operating Lease Obligations | \$9,105 | \$3,103 | \$5,994 | \$8 | \$ — |
| Purchase Commitments | \$3,238 | \$3,238 | \$— | \$— | \$ — |
| Total | \$128,000 | \$10,491 | \$22,501 | \$95,008 | \$ — |

Future debt maturities of long-term debt exclude debt discounts and consist of obligations under the Company's U.S. Loan Agreement, Canadian Loan Agreement, and seller notes.

The Company leases office space under operating leases that expire between 2018 and 2022. The Company also leases computer equipment and software under capital leases.

The Company leases cloud infrastructure with Amazon Web Services to support its cloud infrastructure in conjunction with the consolidation and elimination of a substantial portion of its physical cloud infrastructure formerly maintained around the United States, Canada and the UK.

The Company has an outstanding purchase commitment in 2018 for software development services from DevFactory FZ-LLC ("DevFactory") pursuant to a technology services agreement in the amount of \$3.2 million. See Note 14 - Related Party Transactions, of the Notes to Consolidated Financial Statements for more information

regarding our purchase commitment to this related party.

The agreement has an initial term that expired on December 31, 2017, with an option for either party to renew annually for up to five years. On March 28, 2017, the Company and DevFactory executed an amendment to extend the initial term to December 31, 2021. Additionally, the Company amended the option for either party to renew annually for one additional year. The effective date of the amendment was January 1, 2017. For years after 2018, the purchase commitment amount for software development services will be equal to the prior year purchase commitment increased (decreased) by the percentage change in total revenue for the prior year as compared to the preceding year. For example, if 2018 total revenues increase by 10% as compared to 2017 total revenues, then the 2019 purchase commitment will increase by approximately \$400,000 from the 2018 purchase commitment amount to approximately \$3.6 million.

Off-Balance Sheet Arrangements

During the years ended December 31, 2017, 2016, and 2015, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special-purpose entities, that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and the Use of Estimates

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 accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

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

- revenue recognition and deferred revenue;
- stock-based compensation;
- income taxes; and
- business combinations and the recoverability of goodwill and long-lived assets.

Revenue Recognition

The Company derives revenue from product revenue, consisting of subscription, support and perpetual licenses, and professional services revenues. The Company recognizes revenue when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery of the product or services has occurred, no Company obligations with regard to implementation considered essential to the functionality remain, the fee is fixed or determinable and collectability is probable.

Subscription and Support Revenue

The Company derives subscription revenues by providing its software-as-a-service solution to customers in which the customer does not have the right to take possession of the software, but can use the software for the contracted term. The Company accounts for these arrangements as service contracts. Subscription and support revenues are recognized on a straight-line basis over the term of the contractual arrangement, typically one to three years. Amounts that have been invoiced and that are due are recorded in deferred revenue or revenue, depending on when

the criteria for revenue recognition are met. Revenue from usage-based services are recognized in the month in which such usage is reported.

The Company may provide hosting services to customers who purchased a perpetual license. Such hosting services are recognized ratably over the applicable term of the arrangement. These hosting arrangements are typically for a period of one to three years.

Software maintenance agreements provide technical support and the right to unspecified upgrades on an if-and-when-available basis. Revenue from maintenance agreements is recognized ratably over the life of the related agreement, which is typically one year.

Perpetual License Revenue

The Company also records revenue from the sales of proprietary software products under perpetual licenses. For license agreements in which customer acceptance is a condition to earning the license fees, revenue is not recognized until acceptance occurs. The Company's products do not require significant customization. Perpetual licenses are sold along with software maintenance and, sometimes, hosting agreements. When vendor specific objective evidence (VSOE) of fair value exists for the software maintenance and hosting agreement, the perpetual license is recognized under the residual method whereby the fair value of the undelivered software maintenance and hosting agreement is deferred and the remaining contract value is recognized immediately for the delivered perpetual license. When VSOE of fair value does not exist for either the software maintenance or hosting agreement, the entire contract value is recognized ratably over the underlying software maintenance and/or hosting period.

Professional Services Revenue

Professional services provided with perpetual licenses consist of implementation fees, data extraction, configuration, and training. The Company's implementation and configuration services do not involve significant customization of the software and are not considered essential to the functionality. Revenues from professional services are recognized as such services are provided when VSOE of fair value exists for such services and all undelivered elements such as software maintenance and/or hosting agreements. VSOE of fair value for services is based upon the price charged when these services are sold separately, and is typically an hourly rate. When VSOE of fair value does not exist for software maintenance and/or hosting agreements, revenues from professional services are recognized ratably over the underlying software maintenance and/or hosting period.

Professional services, when sold with the subscription arrangements, are accounted for separately when these services have value to the customer on a standalone basis and there is objective and reliable evidence of fair value for each deliverable. When accounted for separately, revenues are recognized as the services are rendered for time and material contracts. For those arrangements where the elements do not qualify as a separate unit of accounting, the Company recognizes professional services ratably over the contractual life of the related application subscription arrangement. Currently, all professional services are accounted for separately as all have value to the customer on a standalone basis.

Multiple Element Arrangements

The Company enters into arrangements with multiple-element that generally include subscriptions and implementation and other professional services.

For multiple-element arrangements, arrangement consideration is allocated to deliverables based on their relative selling price. In order to treat deliverables in a multiple-element arrangement as separate units of accounting, the elements must have standalone value upon delivery. If the elements have standalone value upon delivery, each element must be accounted for separately. The Company's subscription services have standalone value as such services are often sold separately. In determining whether implementation and other professional services have standalone value apart from the subscription services, the Company considers various factors including the availability of the services from other vendors. The Company has concluded that the implementation services included in multiple-element arrangements have standalone value. As a result, when implementation and other professional services are sold in a multiple-element arrangement, the arrangement consideration is allocated to the identified separate units based on a relative selling price hierarchy. The selling price for an element is based on its VSOE of selling price, if available, third-party evidence of selling price, or TPE, if VSOE is not available or best

estimate of selling price, or BESP, if neither VSOE nor TPE is available. The Company has not established VSOE for its subscription services due to lack of pricing consistency, the introduction of new services and other factors. The Company has determined that TPE is not a practical alternative due to differences in its service offerings compared to other parties and the availability of relevant third-party pricing information. Accordingly, the Company uses BESP to determine the relative selling price.

The Company determined BESP by considering its overall pricing objectives and market conditions. Significant pricing practices taken into consideration include the Company's discounting practices, the size and volume of its transactions, customer characteristics, price lists, go-to-market strategy, historical standalone sales and agreement prices. As the Company's go-to-market strategies evolve, it may modify its pricing practices in the future, which could result in changes in relative selling prices, and include both VSOE and BESP.

Deferred Revenue

Deferred revenue represents either customer advance payments or billings for which the aforementioned revenue recognition criteria have not yet been met.

Stock-Based Compensation

Stock options awarded to employees and directors are measured at fair value at each grant date. The Company accounts for stock-based compensation in accordance with authoritative accounting principles which require all share-based compensation to employees, including grants of employee stock options, to be recognized in the financial statements based on their estimated fair value. Compensation expense is determined under the fair value method using the Black-Scholes option pricing model and recognized ratably over the period the awards vest. The Black-Scholes option pricing model used to compute share-based compensation expense requires extensive use of accounting judgment and financial estimates. Items requiring estimation include the expected term option holders will retain their vested stock options before exercising them, the estimated volatility of the Company's common stock price over the expected term of each stock option, and the number of stock options that will be forfeited prior to the completion of their vesting requirements. Application of alternative assumptions could result in significantly different share-based compensation amounts being recorded in the financial statements. The following table summarizes the weighted-average grant-date fair value of options granted in 2017, 2016, and 2015 and the assumptions used to develop their fair values. As there was no public market for its common stock prior to November 2014, the Company estimates the volatility of its common stock based on the volatility of publicly traded shares of comparable companies' common stock. The Company's decision to use the volatility of comparable stock was based upon the Company's assessment that this information is more representative of future stock price trends than the Company's historical volatility. The Company estimates the expected term using the simplified method, which calculates the expected term as the midpoint between the vesting date and the contractual termination date of each award. The dividend yield assumption is based on historical and expected future dividend payouts. The risk-free interest rate is based on observed market interest rates appropriate for the term of each options.

| | Year Ended December 31, | | |
|---|-------------------------|--------|---------------|
| | 2017 | 2016 | 2015 |
| Weighted average grant-date fair value of options | \$7.47 | \$3.23 | \$3.01 |
| Expected volatility | 35.0% | 42.5% | 42.5% - 44.0% |
| Risk-free interest rate | 1.1% - 2.0% | 1.2% | 1.7% - 1.9% |
| Expected life in years | 5.00 | 5.93 | 5.93 |
| Dividend yield | — | — | — |

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. 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 of a change in tax rates on deferred tax assets and liabilities will be recognized in the period that includes the enactment date. A valuation allowance is established against the deferred tax assets to reduce their carrying value to an amount that is more likely than not to be realized.

The Company accounts for uncertainty of income taxes based on a "more likely than not" threshold for the recognition and derecognition of tax positions, which includes the accounting for interest and penalties.

Goodwill and Other Intangibles

Goodwill arises from business combinations and is measured as the excess of the cost of the business acquired over the sum of the acquisition-date fair value of tangible and identifiable intangible assets acquired, less any liabilities assumed.

Goodwill is evaluated for impairment annually or more frequently when an event occurs or circumstances change that indicate the carrying value may not be recoverable. The events and circumstances considered by the Company include the business climate, legal factors, operating performance indicators and competition.

The excess purchase price over the fair value of assets acquired is recorded as goodwill. We test goodwill for impairment annually in October, or whenever events or changes in circumstances indicate an impairment may have occurred. Because we operate in a single reporting unit, the impairment test is performed at the consolidated entity level by comparing the estimated fair value of the company to the carrying value of the company. We estimate the fair value of the reporting unit using a "step one" analysis using a fair-value-based approach based on the market capitalization or a discounted cash flow analysis of projected future results to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Determining the fair value of goodwill is subjective in nature and often involves the use of estimates and assumptions including, without limitation, use of estimates of future prices and volumes for our products, capital needs, economic trends and other factors which are inherently difficult to forecast. If actual results, or the plans and estimates used in future impairment analyses are lower than the original estimates used to assess the recoverability of these assets, we could incur impairment charges in a future period. The annual impairment test was performed as of October 31, 2017. No impairment of goodwill was identified during the years ended December 31, 2017, 2016, or 2015.

Identifiable intangible assets consist of customer relationships, marketing-related intangible assets and developed technology. Intangible assets with definite lives are amortized over their estimated useful lives on a straight-line basis. The straight-line method of amortization represents the Company's best estimate of the distribution of the economic value of the identifiable intangible assets.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of intangible assets may not be recoverable. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used or any other significant adverse change that would indicate that the carrying amount of an asset or group of assets may not be recoverable. The Company evaluates the recoverability of intangible assets by comparing their carrying amounts to the future net undiscounted cash flows expected to be generated by the intangible assets. If such intangible assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the intangible assets exceeds the fair value of the assets.

The Company determines fair value based on discounted cash flows using a discount rate commensurate with the risk inherent in the Company's current business model for the specific intangible asset being valued. There were no such impairments during 2017, 2016, and 2015.

Other Key Accounting Policies

We also have other key accounting policies, which involve the use of estimates, judgments, and assumptions that are significant to understanding our results. See Note 2 Summary of Significant Accounting Policies, of the Notes to Consolidated Financial Statements included in this Annual Report. Of those policies, we believe that the accounting policies enumerated above involve the greatest degree of complexity and exercise of judgment by our management. We evaluate our estimates, judgments and assumptions on an ongoing basis, and while we believe that our estimates, judgments and assumptions are reasonable, they are based upon information available at the time. Actual results may differ significantly from these estimates under different assumptions, judgments or conditions.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We are choosing to “opt out” of such extended transition period, however, 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. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable. See Note 2 Summary of Significant Accounting Policies, of the Notes to Consolidated Financial Statement for more information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We have operations both within the United States and internationally, and we are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate, foreign exchange and inflation risks, as well as risks relating to changes in the general economic conditions in the countries where we conduct business. The statement of operations impact is mitigated by having an offsetting liability in deferred revenue to partially or completely offset against the outstanding receivable if an account should become uncollectible. Our cash balances are kept in customary operating accounts, a portion of which are insured by the Federal Deposit Insurance Corporation, and uninsured money market accounts. The majority of our cash balances in money market accounts are with Wells Fargo, our lender under our loan facility. To date, we have not used derivative instruments to mitigate the impact of our market risk exposures. We also have not used, nor do we intend to use, derivatives for trading or speculative purposes.

Interest Rate Risk

Our exposure to market risk for changes in interest rates primarily relates to our cash equivalents and any variable rate indebtedness.

The primary objective of our investment activities is to preserve principal while maximizing yields without significantly increasing risk. This objective is accomplished currently by making diversified investments, consisting only of money market mutual funds and certificates of deposit.

Any draws under our loan and security agreements bear interest at a variable rate tied to the prime rate. As of December 31, 2017, we had a principal balance of \$108.5 million under our U.S. Loan Agreement and \$5.3 million under our Canadian Loan Agreement. As of December 31, 2016, we had a principal balance of \$43.8 million under our U.S. Loan Agreement and \$5.6 million under our Canadian Loan Agreement.

Foreign Currency Exchange Risk

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. In addition, we incur a portion of our operating expenses in foreign currencies, including Canadian dollars, British pounds and Euros, and in the future as we expand into other foreign countries, we expect to incur operating expenses in other foreign currencies. In addition, our customers are generally invoiced in the currency of the country in which they are located. We are exposed to foreign exchange rate fluctuations as the financial results of our international operations are translated from the local functional currency into U.S. dollars upon consolidation. A decline in the U.S. dollar relative to foreign functional currencies would increase our non-U.S. revenue and improve our operating results. Conversely, if the U.S. dollar strengthens relative to foreign functional currencies, our revenue

and operating results would be adversely affected. The effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would have resulted in a change in revenue of \$2.1 million for the year ended December 31, 2017. To date, we have not engaged in any hedging strategies. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in foreign currency exchange rates.

Inflation

We do not believe that inflation had a material effect on our business, financial condition or results of operations in the last three fiscal years. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

Item 8. Financial Statements and Supplementary Data

UPLAND SOFTWARE, INC.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Upland Software, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Upland Software, Inc. (the “Company”) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive loss, stockholders’ equity, and cash flows, for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

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

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

We have served as the Company’s auditor since 2013.

/s/ Ernst & Young LLP

Austin, Texas

March 8, 2018

Upland Software, Inc.
Consolidated Balance Sheets

| | December 31, | |
|--|--------------|-----------|
| (in thousands, except share and per share amounts) | 2017 | 2016 |
| Assets | | |
| Current assets: | | |
| Cash and cash equivalents | \$22,326 | \$28,758 |
| Accounts receivable (net of allowance of \$1,069 and \$658 at December 31, 2017 and December 31, 2016, respectively) | 26,504 | 15,254 |
| Prepaid and other | 2,856 | 3,287 |
| Total current assets | 51,686 | 47,299 |
| Canadian tax credits receivable | 1,196 | 978 |
| Property and equipment, net | 2,927 | 4,356 |
| Intangible assets, net | 70,043 | 28,512 |
| Goodwill | 154,607 | 69,097 |
| Other assets | 800 | 346 |
| Total assets | \$281,259 | \$150,588 |
| Liabilities and stockholders' equity | | |
| Current liabilities: | | |
| Accounts payable | \$3,887 | \$1,268 |
| Accrued compensation | 5,157 | 2,541 |
| Accrued expenses and other | 12,148 | 5,505 |
| Deferred revenue | 43,807 | 23,552 |
| Due to sellers | 7,839 | 4,642 |
| Current maturities of notes payable (includes unamortized discount of \$699 and \$329 at December 31, 2017 and December 31, 2016, respectively) | 2,301 | 2,190 |
| Total current liabilities | 75,139 | 39,698 |
| Canadian tax credit liability to sellers | — | 361 |
| Notes payable, less current maturities (includes unamortized discount of \$1,969 and \$1,113 at December 31, 2017 and December 31, 2016, respectively) | 108,843 | 45,739 |
| Deferred revenue | 1,570 | 247 |
| Noncurrent deferred tax liability, net | 3,262 | 3,404 |
| Other long-term liabilities | 1,030 | 2,126 |
| Total liabilities | 189,844 | 91,575 |
| Stockholders' equity: | | |
| Preferred stock, \$0.0001 par value; 5,000,000 shares authorized; no shares issued and outstanding as of December 31, 2017; no shares issued and outstanding as of December 31, 2016, respectively | — | — |
| Common stock, \$0.0001 par value; 50,000,000 shares authorized: 20,768,401 and 17,785,288 shares issued and outstanding as of December 31, 2017 and December 31, 2016, respectively | 2 | 2 |
| Additional paid-in capital | 174,944 | 124,566 |
| Accumulated other comprehensive loss | (2,403) | (3,152) |
| Accumulated deficit | (81,128) | (62,403) |
| Total stockholders' equity | 91,415 | 59,013 |
| Total liabilities and stockholders' equity | \$281,259 | \$150,588 |
| See accompanying notes. | | |

Upland Software, Inc.

Consolidated Statements of Operations

(in thousands, except share and per share amounts)

| | Year Ended December 31, | | |
|---|-------------------------|------------|------------|
| | 2017 | 2016 | 2015 |
| Revenue: | | | |
| Subscription and support | \$85,467 | \$65,552 | \$57,193 |
| Perpetual license | 4,346 | 1,650 | 2,805 |
| Total product revenue | 89,813 | 67,202 | 59,998 |
| Professional services | 8,139 | 7,565 | 9,913 |
| Total revenue | 97,952 | 74,767 | 69,911 |
| Cost of revenue: | | | |
| Subscription and support | 28,454 | 22,734 | 19,586 |
| Professional services | 5,193 | 4,831 | 7,085 |
| Total cost of revenue | 33,647 | 27,565 | 26,671 |
| Gross profit | 64,305 | 47,202 | 43,240 |
| Operating expenses: | | | |
| Sales and marketing | 15,307 | 12,160 | 12,965 |
| Research and development | 15,795 | 14,919 | 15,778 |
| Refundable Canadian tax credits | (542) | (513) | (470) |
| General and administrative | 23,291 | 18,286 | 18,201 |
| Depreciation and amortization | 6,498 | 5,291 | 4,534 |
| Acquisition-related expenses | 15,092 | 5,583 | 2,455 |
| Total operating expenses | 75,441 | 55,726 | 53,463 |
| Loss from operations | (11,136) | (8,524) | (10,223) |
| Other expense: | | | |
| Interest expense, net | (6,582) | (2,781) | (1,858) |
| Other income (expense), net | 289 | (678) | (544) |
| Total other expense | (6,293) | (3,459) | (2,402) |
| Loss before provision for income taxes | (17,429) | (11,983) | (12,625) |
| Provision for income taxes | (1,296) | (1,530) | (1,039) |
| Net loss attributable to common shareholders | \$(18,725) | \$(13,513) | \$(13,664) |
| Net loss per common share: | | | |
| Net loss per common share, basic and diluted | \$(1.02) | \$(0.82) | \$(0.91) |
| Weighted-average common shares outstanding, basic and diluted | 18,411,247 | 16,472,799 | 14,939,601 |
| See accompanying notes. | | | |

Upland Software, Inc.

Consolidated Statements of Comprehensive Loss

| (in thousands) | Year Ended December 31, | | |
|---|-------------------------|------------|------------|
| | 2017 | 2016 | 2015 |
| Net loss | \$(18,725) | \$(13,513) | \$(13,664) |
| Foreign currency translation adjustment | 749 | 137 | (1,573) |
| Comprehensive loss | \$(17,976) | \$(13,376) | \$(15,237) |

See accompanying notes.

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Upland Software, Inc.

Consolidated Statement of Stockholders' Equity

| (in thousands, except share amounts) | Common Stock | | Preferred Stock | Additional Paid-In Capital | Accumulated Other Comprehensive Loss | Accumulated Deficit | Total Stockholders' Equity | |
|---|--------------|--------|-----------------|----------------------------|--------------------------------------|---------------------|----------------------------|-----------|
| | Shares | Amount | Shares | Amount | | | | |
| Balance at December 31, 2015 | 15,746,288 | \$ 2 | — | \$ — | \$ 112,447 | \$ (3,289) | \$ (48,890) | \$ 60,270 |
| Issuance of common stock in business combination | 1,344,463 | — | — | — | 8,300 | — | — | 8,300 |
| Issuance of stock under Company plans, net of shares withheld for tax | 694,537 | — | — | — | (514) | — | — | (514) |
| Stock-based compensation | — | — | — | — | 4,333 | — | — | 4,333 |
| Other comprehensive loss | — | — | — | — | — | 137 | — | 137 |
| Net loss | — | — | — | — | — | — | (13,513) | (13,513) |
| Balance at December 31, 2016 | 17,785,288 | \$ 2 | — | \$ — | \$ 124,566 | \$ (3,152) | \$ (62,403) | \$ 59,013 |
| Issuance of stock under Company plans, net of shares withheld for tax | 843,579 | — | — | — | (2,163) | — | — | (2,163) |
| Issuance of stock, net of issuance costs | 2,139,534 | — | — | — | 42,564 | — | — | 42,564 |
| Stock-based compensation | — | — | — | — | 9,977 | — | — | 9,977 |
| Other comprehensive loss | — | — | — | — | — | 749 | — | 749 |
| Net loss | — | — | — | — | — | — | (18,725) | (18,725) |
| Balance at December 31, 2017 | 20,768,401 | 2 | — | — | 174,944 | (2,403) | (81,128) | 91,415 |

See accompanying notes.

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

| | Year Ended December 31, | | |
|---|-------------------------|------------|------------|
| | 2017 | 2016 | 2015 |
| Operating activities | | | |
| Net loss | \$(18,725) | \$(13,513) | \$(13,664) |
| Adjustments to reconcile net loss to net cash provided by operating activities: | | | |
| Depreciation and amortization | 11,914 | 9,794 | 8,451 |
| Deferred income taxes | (262) |) 529 | 207 |
| Foreign currency re-measurement (gain) loss | (382) |) (64) |) 981 |
| Non-cash interest and other expense | 592 | 327 | 376 |
| Non-cash stock compensation expense | 9,977 | 4,333 | 2,741 |
| Loss on disposal of business | — | 746 | — |
| Non-cash loss on retirement of fixed assets | (19) |) 276 | — |
| Changes in operating assets and liabilities, net of purchase business combinations: | | | |
| Accounts receivable | (4,710) |) (361) |) 741 |
| Prepays and other | 1,555 | 648 | 1,873 |
| Accounts payable | 1,254 | (1,453) |) 157 |
| Accrued expenses and other liabilities | 3,715 | 413 | (2,796) |
| Deferred revenue | 2,807 | 2,200 | (570) |
| Net cash provided by (used in) operating activities | 7,716 | 3,875 | (1,503) |
| Investing activities | | | |
| Purchase of property and equipment | (396) |) (670) |) (956) |
| Purchase of customer relationships | (55) |) (408) |) (791) |
| Purchase business combinations, net of cash acquired | (110,324) | (12,151) |) (7,664) |
| Net cash used in investing activities | (110,775) | (13,229) |) (9,411) |
| Financing activities | | | |
| Payments on capital leases | (1,497) |) (1,683) |) (1,020) |
| Proceeds from notes payable, net of issuance costs | 74,538 | 30,992 | 24,083 |
| Payments on notes payable | (11,912) |) (7,190) |) (23,907) |
| Taxes paid related to net share settlement of equity awards | (3,387) |) (726) |) — |
| Issuance of common stock, net of issuance costs | 43,797 | 211 | (18) |
| Additional consideration paid to sellers of businesses | (5,361) |) (2,079) |) (359) |
| Net cash provided by (used in) financing activities | 96,178 | 19,525 | (1,221) |
| Effect of exchange rate fluctuations on cash | 449 | 114 | (380) |
| Change in cash and cash equivalents | (6,432) |) 10,285 | (12,515) |
| Cash and cash equivalents, beginning of period | 28,758 | 18,473 | 30,988 |
| Cash and cash equivalents, end of period | \$22,326 | \$28,758 | \$18,473 |
| Supplemental disclosures of cash flow information: | | | |
| Cash paid for interest | \$6,012 | \$2,455 | \$1,523 |
| Cash paid for taxes | \$1,782 | \$488 | \$314 |
| Noncash investing and financing activities: | | | |
| Equipment acquired pursuant to capital lease obligations | \$50 | \$1,293 | \$3,428 |
| Issuance of common stock in business combination | \$— | \$8,300 | \$1,386 |
| See accompanying notes. | | | |

Upland Software, Inc.

Notes to Consolidated Financial Statements

1. Organization and Nature of Operations

Upland Software, Inc. (“Upland” or the “Company”) is a provider of cloud-based enterprise work management software. Upland’s software applications help organizations better optimize the allocation and utilization of their people, time, and money. Upland provides a family of cloud-based enterprise work management software applications for the information technology, process excellence, finance, professional services, and marketing functions within organizations. Upland’s software applications address a broad range of enterprise work management needs, from strategic planning to task execution.

2. Summary of Significant Accounting Policies

Basis of Presentation

These consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States, or GAAP. The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to confirm to the current period presentation.

During the third quarter of 2017, we identified and corrected an immaterial charge in the reported non-cash loss on debt extinguishment and interest expense recorded in the second quarter 2017 in our Condensed Consolidated Statements of Operations. The Fourth Amendment to the Company’s Credit Agreement should have been accounted for as a modification rather than an extinguishment in accordance with the accounting literature under ASC 470, Debt. The unaudited Consolidated Statements of Operations for the three months ended September 30, 2017, reflect a reversal of the immaterial non-cash net \$1.4 million charge to loss on debt extinguishment and interest expense. This matter had no effect on the reported revenue, gross profit, or the Condensed Consolidated Statement of Cash Flows and had no material effect on the Condensed Consolidated Balance Sheet, or Condensed Consolidated Statements of Comprehensive Loss. See Note 7 - Debt, of the Notes to Consolidated Financial Statements for more information related to the Company’s Credit Agreement.

Use of Estimates

The preparation of the accompanying consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses. Significant items subject to such estimates include allowance for doubtful accounts, stock-based compensation, acquired intangible assets, the useful lives of intangible assets and property and equipment, and income taxes. In accordance with GAAP, management bases its estimates on historical experience and on various other assumptions that management believes are reasonable under the circumstances. Management regularly evaluates its estimates and assumptions using historical experience and other factors; however, actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash deposits and liquid investments with original maturities of three months or less when purchased. Cash equivalents are stated at cost, which approximates market value, because of the short maturity of these instruments.

Accounts Receivable and Allowance for Doubtful Accounts

The Company extends credit to the majority of its customers. Issuance of credit is based on ongoing credit evaluations by the Company of customers’ financial condition and generally requires no collateral. Trade accounts

receivable are recorded at the invoiced amount and do not bear interest. Invoices generally require payment within 30 days from the invoice date. The Company generally does not charge interest on past due payments, although the Company's contracts with its customers usually allow it to do so.

The Company maintains an allowance for doubtful accounts to reserve for potential uncollectible receivables. The allowance is based upon the creditworthiness of the Company's customers, the customers' historical payment experience, the age of the receivables and current market conditions. Provisions for potentially uncollectible accounts are recorded in sales and marketing expenses. The Company writes off accounts receivable balances to the allowance for doubtful accounts when it becomes likely that they will not be collected.

The following table presents the changes in the allowance for doubtful accounts (in thousands):

| | Year Ended December 31, | | |
|------------------------------|-------------------------|--------|--------|
| | 2017 | 2016 | 2015 |
| Balance at beginning of year | \$ 658 | \$ 581 | \$ 890 |
| Provision | 1,069 | 863 | 412 |
| Divestitures | — | (230) | — |
| Writeoffs, net of recoveries | (658) | (556) | (721) |
| Balance at end of year | \$ 1,069 | \$ 658 | \$ 581 |

Concentrations of Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to credit risk consist of cash and cash equivalents and accounts receivable. The Company's cash and cash equivalents are placed with high-quality financial institutions, which, at times, may exceed federally insured limits. The Company has not experienced any losses in these accounts, and the Company does not believe it is exposed to any significant credit risk related to cash and cash equivalents. The Company provides credit, in the normal course of business, to a number of its customers. The Company performs periodic credit evaluations of its customers and generally does not require collateral. No individual customer represented more than 10% of total revenues nor more than 10% of accounts receivable in the years ended December 31, 2017, 2016, or 2015.

Property and Equipment

Property and equipment are carried at cost, less accumulated depreciation and amortization. Depreciation of property and equipment is computed using the straight-line method over each asset's useful life. Leasehold improvements are amortized over the shorter of the lease term or of the estimated useful lives of the related assets. Upon retirement or disposal, the cost of each asset and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is credited or charged to income. Repairs, maintenance, and minor replacements are expensed as incurred. The estimated useful lives of property and equipment are as follows:

| | |
|---------------------------------|---|
| Computer hardware and equipment | 3 - 5 years |
| Purchased software and licenses | 3 - 5 years |
| Furniture and fixtures | 7 years |
| Leasehold improvements | Lesser of estimated useful life or lease term |

Goodwill and Other Intangibles

Goodwill arises from business combinations and is measured as the excess of the cost of the business acquired over the sum of the acquisition-date fair value of tangible and identifiable intangible assets acquired, less any liabilities assumed.

Goodwill is evaluated for impairment annually or more frequently when an event occurs or circumstances change that indicate the carrying value may not be recoverable. The events and circumstances considered by the Company include the business climate, legal factors, operating performance indicators and competition.

The excess purchase price over the fair value of assets acquired is recorded as goodwill. We test goodwill for impairment annually in October, or whenever events or changes in circumstances indicate an impairment may have occurred. Because we operate as one reporting unit, the impairment test is performed at the consolidated entity level by comparing the estimated fair value of the company to the carrying value of the company. We estimate the fair value of the reporting unit using a "step one" analysis using a fair-value-based approach based on the market capitalization or a discounted cash flow analysis of projected future results to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Determining the fair value of goodwill is subjective in nature and often involves the use of estimates and assumptions including, without limitation, use of estimates of future prices and volumes for our products, capital needs, economic trends and other factors which are inherently difficult to forecast. If actual results, or the plans and estimates used in future impairment analyses are lower than the original estimates used to assess the recoverability of these assets, we could incur impairment charges in a future period. The annual impairment test was performed as of October 31, 2017. No impairment of goodwill was identified during the years ended December 31, 2017, 2016, or 2015.

Identifiable intangible assets consist of customer relationships, marketing-related intangible assets and developed technology. Intangible assets with definite lives are amortized over their estimated useful lives on a straight-line basis. The straight-line method of amortization represents the Company's best estimate of the distribution of the economic value of the identifiable intangible assets.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of intangible assets may not be recoverable. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used or any other significant adverse change that would indicate that the carrying amount of an asset or group of assets may not be recoverable. The Company evaluates the recoverability of intangible assets by comparing their carrying amounts to the future net undiscounted cash flows expected to be generated by the intangible assets. If such intangible assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the intangible assets exceeds the fair value of the assets.

The Company determines fair value based on discounted cash flows using a discount rate commensurate with the risk inherent in the Company's current business model for the specific intangible asset being valued. There were no impairments during 2017, 2016, and 2015.

Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or circumstances indicate their carrying value may not be recoverable. When such events or circumstances arise, an estimate of future undiscounted cash flows produced by the asset, or the appropriate grouping of assets, is compared to the asset's carrying value to determine whether impairment exists. If the asset is determined to be impaired, the impairment loss is measured based on the excess of its carrying value over its fair value. Assets to be disposed of are reported at the lower of the carrying value or net realizable value. No indicators of impairment were identified during the years ended December 31, 2017, 2016, or 2015.

Software Development Costs

Software development costs are expensed as incurred until the point the Company establishes technological feasibility. Technological feasibility is established upon the completion of a working model. Costs incurred by the Company between establishment of technological feasibility and the point at which the product is ready for general release are capitalized, subject to their recoverability, and amortized over the economic life of the related products. Because the Company believes its current process for developing its software products essentially results in the completion of a working product concurrent with the establishment of technological feasibility, no software development costs have been capitalized to date. There were no software development costs required to be

capitalized under ASC 985-20, Costs of Software to be Sold, Leased or Marketed, and under ASC 350-40, Internal-Use Software.

Canadian Tax Credits

Canadian tax credits related to current expenses are accounted for as a reduction of the research and development costs. Such credits relate to the Company's operations in Canada and are not dependent upon taxable income. Credits are accrued in the year in which the research and development costs or the capital expenditures are incurred, provided the Company is reasonably certain that the credits will be received. The government credit must be examined and approved by the tax authorities, and it is possible that the amounts granted will differ from the amounts recorded.

Debt Issuance Costs

The Company capitalizes underwriting, legal, and other direct costs incurred related to the issuance of debt, which are recorded as a direct deduction from the carrying amount of the related debt liability and amortized to interest expense over the term of the related debt using the effective interest rate method. Upon the extinguishment of the related debt, any unamortized capitalized deferred financing costs are recorded to interest expense. In 2015, the Company wrote off approximately \$0.2 million of deferred financing costs associated with its Comerica facility replaced by the new Wells Fargo facility. In 2017, the Company had no write offs of deferred financing costs and in 2016 the Company wrote off approximately \$0.1 million of deferred financing costs associated with the expansion of its Wells Fargo facility.

Fair Value of Financial Instruments

The Company accounts for financial instruments in accordance with the authoritative guidance on fair value measurements and disclosures for financial assets and liabilities. This guidance defines fair value, establishes a framework for measuring fair value in accordance with GAAP, and expands disclosures about fair value measurements. The guidance also establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value.

These tiers include Level 1, defined as observable inputs, such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore, requiring an entity to develop its own assumptions.

The Company's financial instruments consist principally of cash and cash equivalents, accounts receivable, and accounts payable, long-term debt and warrant liabilities. The carrying value of cash and cash equivalents, accounts receivable, and accounts payable approximate fair value, primarily due to short maturities. The carrying values of the Company's debt instruments approximated their fair value based on rates currently available to the Company. The carrying values of warrant liabilities are marked to the market at each reporting period.

Revenue Recognition

The Company derives revenue from product revenue, consisting of subscription, support and perpetual licenses, and professional services revenues. The Company recognizes revenue when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery of the product or services has occurred, no Company obligations with regard to implementation considered essential to the functionality remain, the fee is fixed or determinable and collectability is probable.

Subscription and Support Revenue

The Company derives subscription revenues by providing its software-as-a-service solution to customers in which the customer does not have the right to take possession of the software, but can use the software for the contracted term. The Company accounts for these arrangements as service contracts. Subscription and support revenues are

recognized on a straight-line basis over the term of the contractual arrangement, typically one to three years. Amounts that have been invoiced and that are due are recorded in deferred revenue or revenue, depending on when the criteria for revenue recognition are met. Revenue from usage-based services are recognized in the month in which such usage is reported.

The Company may provide hosting services to customers who purchased a perpetual license. Such hosting services are recognized ratably over the applicable term of the arrangement. These hosting arrangements are typically for a period of one to three years.

Software maintenance agreements provide technical support and the right to unspecified upgrades on an if-and-when-available basis. Revenue from maintenance agreements is recognized ratably over the life of the related agreement, which is typically one year.

Perpetual License Revenue

The Company also records revenue from the sales of proprietary software products under perpetual licenses. For license agreements in which customer acceptance is a condition to earning the license fees, revenue is not recognized until acceptance occurs. The Company's products do not require significant customization. Perpetual licenses are sold along with software maintenance and, sometimes, hosting agreements. When vendor specific objective evidence (VSOE) of fair value exists for the software maintenance and hosting agreement, the perpetual license is recognized under the residual method whereby the fair value of the undelivered software maintenance and hosting agreement is deferred and the remaining contract value is recognized immediately for the delivered perpetual license. When VSOE of fair value does not exist for either the software maintenance or hosting agreement, the entire contract value is recognized ratably over the underlying software maintenance and/or hosting period.

Professional Services Revenue

Professional services provided with perpetual licenses consist of implementation fees, data extraction, configuration, and training. The Company's implementation and configuration services do not involve significant customization of the software and are not considered essential to the functionality. Revenues from professional services are recognized as such services are provided when VSOE of fair value exists for such services and all undelivered elements such as software maintenance and/or hosting agreements. VSOE of fair value for services is based upon the price charged when these services are sold separately, and is typically an hourly rate. When VSOE of fair value does not exist for software maintenance and/or hosting agreements, revenues from professional services are recognized ratably over the underlying software maintenance and/or hosting period.

Professional services, when sold with the subscription arrangements, are accounted for separately when these services have value to the customer on a standalone basis and there is objective and reliable evidence of fair value for each deliverable. When accounted for separately, revenues are recognized as the services are rendered for time and material contracts. For those arrangements where the elements do not qualify as a separate unit of accounting, the Company recognizes professional services ratably over the contractual life of the related application subscription arrangement. Currently, all professional services are accounted for separately as all have value to the customer on a standalone basis.

Multiple Element Arrangements

The Company enters into arrangements with multiple-element that generally include subscriptions and implementation and other professional services.

For multiple-element arrangements, arrangement consideration is allocated to deliverables based on their relative selling price. In order to treat deliverables in a multiple-element arrangement as separate units of accounting, the elements must have standalone value upon delivery. If the elements have standalone value upon delivery, each element must be accounted for separately. The Company's subscription services have standalone value as such services are often sold separately. In determining whether implementation and other professional services have standalone value apart from the subscription services, the Company considers various factors including the availability of the services from other vendors. The Company has concluded that the implementation services included in multiple-element arrangements have standalone value. As a result, when implementation and other professional services are sold in a multiple-element arrangement, the arrangement consideration is allocated to the

identified separate units based on a relative selling price hierarchy. The selling price for a element is based on its VSOE of selling price, if available, third-party evidence of selling price, or TPE, if VSOE is not available or best estimate of selling price, or BESP, if neither VSOE nor TPE is available. The Company has not established VSOE for its subscription services due to lack of pricing consistency, the introduction of new services and other factors. The Company has determined that TPE is not a practical alternative due to differences in its service offerings compared to other parties and the availability of relevant third-party pricing information. Accordingly, the Company uses BESP to determine the relative selling price.

The Company determined BESP by considering its overall pricing objectives and market conditions. Significant pricing practices taken into consideration include the Company's discounting practices, the size and volume of its transactions, customer characteristics, price lists, go-to-market strategy, historical standalone sales and agreement prices. As the Company's go-to-market strategies evolve, it may modify its pricing practices in the future, which could result in changes in relative selling prices, and include both VSOE and BESP.

Deferred Revenue

Deferred revenue represents either customer advance payments or billings for which the aforementioned revenue recognition criteria have not yet been met.

Messaging-related Revenue

The Company recognizes subscription revenue for its digital engagement application which provides short code connectivity for its two-way SMS programs and campaigns. The Company evaluates whether it is appropriate to recognize revenue based on the gross amount billed to its customers for these services. Since the Company is primarily obligated in these transactions, has latitude in establishing prices associated with its messaging program management services, is responsible for fulfillment of the transaction, and has credit risk, revenue is recorded on a gross basis. While none of the factors individually are considered presumptive or determinative, in reaching conclusions on gross versus net revenue recognition, the Company places the most weight on the analysis of whether or not it is the primary obligor in the arrangement.

Cost of Revenue

Cost of revenue primarily consists of salaries and related expenses (e.g. bonuses, employee benefits, and payroll taxes) for personnel directly involved in the delivery of services and products directly to customers. Cost of revenue also includes the amortization of acquired technology.

Customer Contract Acquisition Costs

Costs associated with the acquisition or origination of customer contracts are expensed as incurred.

Customer Relationship Acquisition Costs

Costs associated with the acquisition or origination of customer relationships are capitalized as customer relationship assets as incurred and amortized over the estimated life of the customer relationship.

Advertising Costs

Advertising costs are expensed in the period incurred. Advertising expenses were \$33,000, \$59,000 and \$347,000 for the years ended December 31, 2017, 2016, or 2015, respectively. Advertising costs are recorded in sales and marketing expenses in the accompanying consolidated statement of operations.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. 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 of a change in tax rates on deferred tax assets and liabilities will be recognized

in the period that includes the enactment date. A valuation allowance is established against the deferred tax assets to reduce their carrying value to an amount that is more likely than not to be realized.

The Company has adopted a permanent reinvestment position whereby foreign earnings for foreign subsidiaries are expected to be reinvested and future earnings are not expected to repatriated. As a result of this policy, no tax liability has been accrued in anticipation of future dividends from foreign subsidiaries.

The Company accounts for uncertainty of income taxes based on a “more likely than not” threshold for the recognition and derecognition of tax positions, which includes the accounting for interest and penalties.

Stock-Based Compensation

Stock options awarded to employees and directors are measured at fair value at each grant date. The Company accounts for stock-based compensation in accordance with authoritative accounting principles which require all share-based compensation to employees, including grants of employee stock options, to be recognized in the financial statements based on their estimated fair value. Compensation expense is determined under the fair value method using the Black-Scholes option pricing model and recognized ratably over the period the awards vest. The Black-Scholes option pricing model used to compute share-based compensation expense requires extensive use of accounting judgment and financial estimates. Items requiring estimation include the expected term option holders will retain their vested stock options before exercising them, the estimated volatility of the Company’s common stock price over the expected term of each stock option, and the number of stock options that will be forfeited prior to the completion of their vesting requirements. Application of alternative assumptions could result in significantly different share-based compensation amounts being recorded in the financial statements. The following table summarizes the weighted-average grant-date fair value of options granted in 2017, 2016, and 2015 and the assumptions used to develop their fair values. As there was no public market for its common stock prior to November 2014, the Company estimates the volatility of its common stock based on the volatility of publicly traded shares of comparable companies' common stock. The Company's decision to use the volatility of comparable stock was based upon the Company's assessment that this information is more representative of future stock price trends than the Company's historical volatility. The Company estimates the expected term using the simplified method, which calculates the expected term as the midpoint between the vesting date and the contractual termination date of each award. The dividend yield assumption is based on historical and expected future dividend payouts. The risk-free interest rate is based on observed market interest rates appropriate for the term of each options.

| | Year Ended December 31, | | |
|---|-------------------------|--------|---------------|
| | 2017 | 2016 | 2015 |
| Weighted average grant-date fair value of options | \$7.47 | \$3.23 | \$3.01 |
| Expected volatility | 35.0% | 42.5% | 42.5% - 44.0% |
| Risk-free interest rate | 1.1% - 2.0% | 1.2% | 1.7% - 1.9% |
| Expected life in years | 5.00 | 5.93 | 5.93 |
| Dividend yield | — | — | — |

Comprehensive Loss

The Company utilizes the guidance in Accounting Standards Codification (ASC) Topic 220, Comprehensive Income, for the reporting and display of comprehensive loss and its components in the consolidated financial statements.

Comprehensive loss comprises net loss and cumulative foreign currency translation adjustments. The accumulated comprehensive loss as of December 31, 2017, 2016, and 2015 was due to foreign currency translation adjustments.

Foreign Currency Transactions

Results of operations for foreign subsidiaries are translated in United State dollars using the average exchange rates on a monthly basis during the year. The assets and liabilities of those subsidiaries are translated into United States dollars using the exchange rates at the balance sheet date. The related translation adjustments are recorded in a separate component of stockholders' equity in accumulated other comprehensive loss. Foreign currency transaction gains and losses are included in the statements of operations and include the impact of revaluation of certain foreign currency denominated net assets or liabilities held internationally. For the years ended December 31, 2017, 2016, and 2015, foreign currency transaction losses were \$178,000, \$271,000, and \$515,000, respectively.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," or ASU 2014-09, which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount an entity expects to be entitled to when products are transferred to customers. In August 2015, the FASB issued ASU No. 2015-14, "Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date," or ASU 2015-14, that deferred the effective date by one year to December 15, 2017 for interim and annual reporting periods beginning after that date. In 2016, the FASB issued the following amendments to ASC 606: ASU No. 2016-08, "Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)," which clarifies the implementation guidance on principal versus agent considerations; ASU No. 2016-10, "Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing," which clarifies guidance on identification of performance obligations and licensing implementation; ASU No. 2016-12, "Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients," which provides clarifying guidance on assessing collectibility, presentation of sales taxes, noncash consideration, contract modifications and completed contracts; and ASU No. 2016-20, "Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers," which clarifies narrow aspects of ASC 606 or corrects unintended application of the guidance. ASC 606 will be effective for us beginning in our first quarter of 2018 using the modified retrospective method.

We continue to evaluate all potential impacts of the new standard, as well as the changes that are required to systems, processes and internal controls to meet the new standard's reporting and disclosure requirements. We currently believe the most significant impact relates to our accounting for arrangements that include contractual provisions providing for periodic price increases in subscription fee arrangements. Under current GAAP, we account for periodic price increases in the period in which they occur, and under the new standard, we will recognize revenue for periodic price increases on a ratable basis over the term of the contract. Additionally under current GAAP, for contracts in which customers host and manage our solutions on-premises or in third-party data centers under term license and maintenance agreements, we recognize the entire arrangement consideration monthly over the term of the software license as we do not have VSOE of fair value for the license and maintenance. Under the new standard, we will be able to recognize software license revenue once the customer obtains control of the license, which will generally occur at the start of each license term. Under current GAAP, we also defer only direct and incremental commission costs to obtain a contract and amortize those costs over the term of the related contract. Under the new standard, we will be required to defer additional incremental costs related to the customer contract and amortize those costs over the expected period of customer benefit. Also a portion of the commission payment will now be expensed as incurred. We are substantially complete with our evaluation of the effect that the adoption will have on our consolidated financial statements. In connection with the adoption of Topic 606, we expect to record a cumulative-effect adjustment to accumulated deficit of approximately \$6.3 million to \$6.7 million on December 31, 2017. The adjustment reflects the acceleration of revenues and deferral of expenses.

In August 2016, the FASB issued ASU 2016-15, Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 is intended to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows and to eliminate the diversity in practice related to such classifications. The guidance in ASU 2016-15 is required for annual reporting periods beginning after December 15, 2017, with early adoption permitted. The Company does not expect the adoption of this guidance will have a material impact on its financial statements.

In January 2017, the FASB issued ASU 2017-01, Clarifying the Definition of a Business, which revises the definition of a business and assists in the evaluation of when a set of transferred assets and activities is a business. ASU 2017-01 is effective for interim and annual reporting periods beginning after December 15, 2017, and should be applied prospectively. Early adoption is permitted under certain circumstances. The Company does not expect the adoption of this guidance will have a material impact on its financial statements.

In May 2017, the FASB issued ASU 2017-09, Compensation - Stock Compensation: Scope of Modification Accounting, which provides guidance about which changes to the terms or conditions of a share-based payment awarded require an entity to apply modification accounting. ASU 2017-09 is effective for interim and annual reporting periods beginning after December 15, 2017, with early adoption permitted. The amendments in ASU 2017-09 are to be applied prospectively to an award modified on or after the adoption date; consequently, the impact will be dependent on whether we modify any share-based payment awards and the nature of such modifications. The adoption of this standard is not expected to have a material impact on our financial statements.

In February 2016, the FASB issued ASU 2016-02, Leases. The core change with ASU 2016-2 is the requirement for the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the effect that the adoption of ASU 2016-02 will have on its financial statements.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments, which changes the impairment model for most financial assets. The new model uses a forward-looking expected loss method, which will generally result in earlier recognition of allowances for losses. ASU 2016-13 is effective for annual and interim periods beginning after December 15, 2019 and early adoption is permitted for annual and interim periods beginning after December 15, 2018. The Company is currently evaluating the effect that the adoption of ASU 2016-13 will have on its financial statements.

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other: Simplifying the Test for Goodwill Impairment. ASU 2017-04 eliminates step two of the goodwill impairment test and specifies that goodwill impairment should be measured by comparing the fair value of a reporting unit with its carrying amount. Additionally, the amount of goodwill allocated to each reporting unit with a zero or negative carrying amount of net assets should be disclosed. ASU 2017-04 is effective for annual or interim goodwill impairment tests performed in fiscal years beginning after December 15, 2019; early adoption is permitted. We currently anticipate that the adoption of ASU 2017-04 will not have a material impact on our consolidated financial statements.

Recently adopted accounting pronouncements

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements - Going Concern: Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. The new standard provides guidance around management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016, with early adoption permitted. The Company adopted ASU 2014-15 during the first quarter of 2017. No additional disclosure was deemed necessary upon the adoption of ASU 2014-15. This standard would not result in an amount being recorded.

In March 2016, the FASB issued ASU 2016-09, Stock Compensation. The core change with ASU 2016-09 is the simplification of several aspects of the accounting for share-based payment transactions, including the income tax consequences, classifications of awards as either equity or liabilities, and classification on the statement of cash flows. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016, with early adoption permitted. The Company adopted ASU 2016-09 during the first quarter of 2017. No impact on the financial statements was recorded as a result of the adoption of ASU 2016-09.

3. Acquisitions

2017 Acquisitions

On January 10, 2017, Upland completed its acquisition of Omtool, Ltd., an enterprise document capture, fax, and workflow solution company. The purchase price paid for Omtool was \$19.3 million (net of cash acquired). Revenues recorded since the acquisition date through December 31, 2017 were approximately \$10.7 million.

On April 21, 2017, the Company acquired RightAnswers, Inc. ("RightAnswers"), a cloud-based knowledge management system. The purchase price was \$17.4 million, in cash at closing (net of \$0.1 million cash acquired) and a \$2.5 million cash holdback payable in one year (subject to indemnification claims) and excludes potential future earn-out payments valued at \$4.0 million tied to additional performance-based goals, towards which \$1.0 million was paid in September, 2017 and an additional \$2.0 million was earned but not paid as of December 31, 2017. Revenues recorded since the acquisition date through December 31, 2017 were approximately \$5.6 million.

On July 12, 2017, the Company acquired Waterfall International Inc. ("Waterfall"), a cloud-based mobile messaging platform. The purchase price consideration paid was approximately \$24.4 million in cash at closing (net of \$0.4 million of cash acquired) and a \$1.5 million cash holdback payable in 18 months (subject to indemnification claims). The foregoing excludes additional potential \$3.0 million in earnout payments tied to performance-based conditions. Revenues recorded since the acquisition date through December 31, 2017 were approximately \$5.5 million.

On November 16, 2017, Upland Software, Inc., a Delaware corporation (the "Company" or "Upland") completed its acquisition of Qvidian Corporation, a Delaware corporation ("Qvidian"), a Massachusetts-based provider of cloud-based RFP and sales-proposal automation software. The purchase price consideration paid by the Company was \$50 million in cash. Revenues recorded since the acquisition date through December 31, 2017 were approximately \$1.2 million. The pro forma statements of operations data for years ended December 31, 2017 and December 31, 2016, shown in table below, give effect to the Qvidian acquisition, described above, as if it had occurred at January 1, 2016. These amounts have been calculated after applying our accounting policies and adjusting the results of Qvidian to reflect: the costs of debt financing incurred to acquire Qvidian, the additional intangible amortization and the adjustments to acquired deferred revenue that would have been occurred assuming the fair value adjustments had been applied and incurred since January 1, 2016. This pro forma data is presented for informational purposes only and does not purport to be indicative of our future results of operations. The table below shows the Pro forma statements of operations data for the respective years ending December 31 (in thousands):

| | 2017 | 2016 |
|--|------------|------------|
| Revenue | \$115,707 | \$89,906 |
| Loss from continuing operations ⁽¹⁾ | \$(13,679) | \$(14,370) |

(1) While some recurring adjustments impact the pro forma figures presented, the decrease in pro forma loss from continuing operations compared to our loss from continuing operations presented on the consolidated statements of operations for the year ended December 31, 2017 includes nonrecurring adjustment removing acquisition costs from 2017 and reflects these costs in the year ended 2016, the year the acquisition was assumed to be completed for pro forma purposes.

2016 Acquisitions

On January 7, 2016, Upland completed its purchase of substantially all of the assets of LeadLander, Inc. (LeadLander), a website analytics provider. The purchase price consideration paid was approximately \$8.0 million in cash payable at closing (net of approximately \$0.4 million of cash acquired) and a \$1.2 million cash holdback payable in 12 months (subject to indemnification claims), which was fully paid after December 31, 2016.

In addition to the cash consideration described above, the Asset Purchase Agreement included a contingent share consideration component pursuant to which Upland issued an aggregate of \$2.4 million in common stock on July 25, 2016. The Company also paid additional consideration of \$2.4 million in March, 2017 in cash to the selling shareholders of LeadLander based on the achievement of certain revenue targets during fiscal years 2016 & 2017 and no further payment are expected to be made as of December 31, 2017.

On March 14, 2016, Upland completed its purchase of substantially all of the assets of HipCricket, Inc., a cloud-based mobile messaging software provider. The consideration paid to the seller consisted of our issuance of one million shares of our common stock and the transfer of our EPM Live product business. The value of the shares on the closing date of the transaction was approximately \$5.7 million and the fair value of our EPM Live product business was approximately \$5.9 million. The Company recognized a loss on the transfer in conjunction with the EPM Live net asset value of approximately \$0.7 million in Other expense, net. Prior to the transaction, HipCricket was owned by an affiliate of ESW Capital, LLC, which is a shareholder of Upland. Raymond James & Co. provided a fairness opinion to Upland in connection with the transaction.

On April 27, 2016, Upland acquired Advanced Processing & Imaging, Inc., a content management platform driving workflow in governments and schools. The purchase price consideration consisted of \$4.1 million in cash payable at closing (net of \$0.1 million of cash acquired), and a \$0.8 million cash holdback payable in 12 months (subject to indemnification claims).

2015 Acquisitions

On November 13, 2015, the Company acquired 100% of the outstanding capital of Ultriva, Inc. (Ultriva) for total purchase consideration of \$7.2 million, which included cash of \$5.6 million, net of \$0.4 million of cash acquired, 179,298 shares of the Company's common stock with a fair value of \$1.4 million, and an additional \$200,000 in shares of common stock held in escrow, subject to indemnification claims, one year from the date of the acquisition. In November 2016, the Company issued 24,587 shares of common stock valued at approximately \$200,000 as a result of the escrow release. Ultriva provides cloud-based supply chain work management software.

The Company recorded the purchase of the acquisitions described above using the acquisition method of accounting and, accordingly, recognized the assets acquired and liabilities assumed at their fair values as of the date of the acquisition. The purchase price allocations for the 2015 acquisition of Ultriva, the 2016 acquisitions of LeadLander, HipCricket, and API, the 2017 acquisitions of Omtool and RightAnswers are final, and the 2017 acquisitions of Waterfall and Qvidian are preliminary as the Company has not obtained and evaluated all of the detailed information, including the valuation of assets acquired and liabilities assumed, necessary to finalize the opening balance sheet amounts in all respects. Management has recorded the preliminary purchase price allocations based upon acquired company information that is currently available. Management expects to finalize its purchase price allocations in the first half of 2018.

The following condensed table presents the preliminary and final acquisition-date fair value of the assets acquired and liabilities assumed for the acquisitions, as well as assets and liabilities (in thousands):

| Year Acquired | Preliminary | | Finalized | | | | | |
|---------------------------|-----------------|-------------------|----------------------|-----------------|-------------|--------------------|--------------------|-----------------|
| | Qvidian 2017 | Waterfall 2017 | RightAnswers 2017 | OmsTool 2017 | API 2016 | LeadLander 2016 | HipCricket 2016 | Ultriva 2015 |
| Cash | \$468 | \$100 | \$139 | \$2,957 | \$125 | \$365 | \$— | \$372 |
| Accounts receivable | 1,907 | 1,477 | 2,164 | 784 | 821 | 199 | 1,226 | 689 |
| Other current assets | 334 | 608 | 246 | 464 | 54 | 55 | 273 | 52 |
| Property and equipment | 108 | 23 | 408 | 58 | 68 | 5 | — | 16 |
| Customer relationships | 14,461 | 6,400 | 10,500 | 4,400 | 1,420 | 970 | 1,000 | 1,820 |
| Trade name | 319 | 110 | 180 | 170 | 40 | 70 | 70 | 140 |
| Technology | 5,622 | 2,800 | 2,300 | 3,180 | 810 | 1,410 | 900 | 960 |
| Goodwill | 36,261 | 18,565 | 15,680 | 14,081 | 3,420 | 13,104 | 8,531 | 4,739 |
| Other assets | 8 | — | — | 33 | 89 | 6 | — | 32 |
| Total assets acquired | 59,488 | 30,083 | 31,617 | 26,127 | 6,847 | 16,184 | 12,000 | 8,820 |
| Accounts payable | (388) | (605) | (139) | (219) | (11) | — | (44) | (196) |
| Accrued expense and other | (445) | (1,126) | (2,108) | (915) | (137) | (254) | — | (284) |
| Deferred revenue | (8,655) | (1,220) | (5,479) | (2,779) | (1,699) | (910) | (356) | (760) |
| Total liabilities assumed | (9,488) | (2,951) | (7,726) | (3,913) | (1,847) | (1,164) | (400) | (1,240) |
| Total consideration | \$50,000 | \$27,132 | \$23,891 | \$22,214 | \$5,000 | \$15,020 | \$11,600 | \$7,580 |

Tangible assets were valued at their respective carrying amounts, which approximates their estimated fair value. The valuation of identifiable intangible assets reflects management's estimates based on, among other factors, use of established valuation methods. Customer relationships were valued using an income approach, which estimates fair value based on the earnings and cash flow capacity of the subject asset. The value of the marketing-related intangibles was determined using a relief-from-royalty method, which estimates fair value based on the value the owner of the asset receives from not having to pay a royalty to use the asset. Developed technology was valued using a cost-to-recreate approach.

Goodwill deductible for tax purposes is \$4.9 million for our LeadLander acquisition, \$8.7 million for HipCricket and \$3.7 million for Waterfall. There was no Goodwill deductible for tax purposes for our API, OmsTool, RightAnswers, and Qvidian acquisitions.

Total transaction costs incurred with respect to acquisition activity in the years ended December 31, 2017, 2016, and 2015 were \$6.1 million, \$3.6 million, and \$2.2 million, respectively.

4. Fair Value Measurements

Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. GAAP sets forth a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. The three tiers are Level 1, defined as observable inputs, such as quoted market prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, which therefore requires an entity to develop its own assumptions.

Changes to the fair value of earnout liabilities are recorded to other expense, net. Liabilities measured at fair value on a recurring basis are summarized below (in thousands):

Fair Value Measurements
at December 31, 2017
Level 1 Level 2 Level 3 Total

Liabilities:

Earnout consideration liability \$— \$ —\$3,576 \$3,576

Fair Value Measurements
at December 31, 2016
Level 1 Level 2 Level 3 Total

Liabilities:

Earnout consideration liability \$— \$ —\$2,500 \$2,500

The Level 3 earnout consideration liability consists of amounts associated with the acquisitions of LeadLander in January 2016, RightAnswers in April 2017, and Waterfall in July 2017. The December 31, 2016 Level 3 earnout consideration liability opening balance for LeadLander of \$2.5 million was settled in March 2017, a Level 3 earnout consideration liability associated with RightAnswers added \$4.0 million in April 2017, of which \$1.0 million was settled during September 2017, \$1.0 million settled unearned as of December 31, 2017, leaving a remaining balance of \$2.0 million as of December 31, 2017. In addition, a Level 3 earnout consideration liability associated with Waterfall added \$1.2 million in July 2017 and was increased by \$0.4 million as of December 31, 2017, resulting in a revised earnout liability of \$1.6 million as of December 31, 2017.

The following table presents additional information about liabilities measured at fair value on a recurring basis and for which we have utilized significant unobservable (Level 3) inputs to determine fair value:

| | |
|-------------------------------------|---------|
| Ending balance at December 31, 2016 | 2,500 |
| Additions - cash earnouts | 5,598 |
| Settlements - cash earnouts | (4,522) |
| Ending balance at December 31, 2017 | 3,576 |

The fair value of the earnout consideration was determined using the Binary Option model based on the present value of the probability-weighted earnout consideration.

Debt

The Company believes the carrying value of its long-term debt at December 31, 2017 approximates its fair value based on the variable interest rate feature or based upon interest rates currently available to the Company. The carrying value and estimated fair value of our debt at December 31, 2017 and December 31, 2016 is \$113.8 million and \$49.4 million, respectively, based on valuation methodologies using interest rates currently available to the Company which are Level 2 inputs.

5. Goodwill and Other Intangible Assets

Changes in the Company's goodwill balance for each of the two years in the period ended December 31, 2017 are summarized in the table below (in thousands):

| | |
|--|-----------|
| Balance at December 31, 2015 | 47,422 |
| Acquired in business combinations | 25,037 |
| Divestiture of business | (3,775) |
| Adjustment due to prior year business combinations | 57 |
| Foreign currency translation adjustment | 356 |
| Balance at December 31, 2016 | \$69,097 |
| Acquired in business combinations | 88,819 |
| Adjustment due to prior year business combinations | 17 |
| Adjustment due to finalization of 2017 business combinations | (4,232) |
| Foreign currency translation adjustment | 906 |
| Balance at December 31, 2017 | \$154,607 |

Intangible assets, net, include the estimated acquisition-date fair values of customer relationships, marketing-related assets, and developed technology that the Company recorded as part of its business acquisitions purchases and from acquisitions of customer relationships. The following is a summary of the Company's intangible assets, net (in thousands):

| | Estimated Useful Life (Years) | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
|-------------------------|----------------------------------|--------------------------|-----------------------------|------------------------|
| December 31, 2017 | | | | |
| Customer relationships | 5-10 | \$ 69,061 | \$ 18,040 | \$ 51,021 |
| Trade name | 1.5 | 3,431 | 2,900 | 531 |
| Developed technology | 4-7 | 29,308 | 10,817 | 18,491 |
| Total intangible assets | | \$ 101,800 | \$ 31,757 | \$ 70,043 |
| | Estimated Useful Life (Years) | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
| December 31, 2016 | | | | |
| Customer relationships | 1-10 | \$ 32,703 | \$ 12,418 | \$ 20,285 |
| Trade name | 1.5-3 | 2,636 | 2,462 | 174 |
| Developed technology | 4-7 | 15,228 | 7,175 | 8,053 |
| Total intangible assets | | \$ 50,567 | \$ 22,055 | \$ 28,512 |

The following table summarizes the Company's weighted-average amortization period, in total and by major finite-lived intangible asset class, by acquisition during the year ended December 31 (in years):

| | 2017 | 2016 |
|--|------|------|
| Customer relationships | 9.0 | 9.3 |
| Trade name | 1.5 | 2.8 |
| Developed technology | 6.4 | 6.3 |
| Total weighted-average amortization period | 8.2 | 8.0 |

The Company periodically reviews the estimated useful lives of its identifiable intangible assets, taking into consideration any events or circumstances that might result in either a diminished fair value or revised useful life. Management has determined there have been no other indicators of impairment or change in the useful life during the years ended December 31, 2017, 2016, and 2015. Total amortization expense was \$9.6 million, \$7.2 million, and \$6.1 million during the years ended December 31, 2017, 2016, and 2015, respectively.

Estimated annual amortization expense for the next five years and thereafter is as follows (in thousands):

| | Amortization Expense |
|--------------------------|-------------------------|
| Year ending December 31: | |
| 2018 | 12,847 |
| 2019 | 11,668 |
| 2020 | 10,605 |
| 2021 | 10,209 |
| 2022 and thereafter | 24,714 |
| Total | \$ 70,043 |

6. Income Taxes

The Tax Act was enacted in December 2017. The Tax Act significantly changes U.S. tax law by, among other things, lowering U.S. corporate income tax rates, implementing a territorial tax system and imposing a one-time transition tax on deemed repatriated earnings of foreign subsidiaries. The Tax Act reduces the U.S. corporate income tax rate from 35% to 21%, effective January 1, 2018.

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 reverse. As a result of the reduction in the U.S. corporate income tax rate from 35% to 21% under the Tax Act, the Company revalued its ending net deferred tax liabilities at December 31, 2017 and recognized a provisional \$0.8 million tax benefit.

The Tax Act provided for a one-time transition tax on the deemed repatriation of post-1986 undistributed foreign subsidiary earnings and profits (“E&P”). Due to a current year tax loss in excess of the required deemed repatriation, we have not recognized a provisional income tax expense related to the transition tax. After utilization of the current year tax loss, existing net operating loss and tax credits carryforwards, the Company expects to pay minimal U.S. federal cash taxes on the deemed repatriation.

While the Tax Act provides for a modified territorial tax system, beginning in 2018, global intangible low-taxed income (“GILTI”) provisions will be applied providing an incremental tax on low taxed foreign income. The GILTI provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s tangible assets. Under U.S. GAAP, the Company is required to make an accounting policy election to either (1) treat taxes due related to GILTI as a current-period expense when incurred (the “period cost method”) or (2) factor such amounts into its measurement of its deferred taxes (the “deferred method”). The Company is continuing to evaluate the GILTI tax rules and has not yet adopted its policy to account for the related impacts.

The SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”) to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act and allows the registrant to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. The Company has included in its taxable income the provisional impact related to the one-time transition tax and the revaluation of deferred tax balances and included these estimates in its consolidated financial statements for the year ended December 31, 2017. The Company is in the process of analyzing the impact of the various provisions of the Tax Act. The ultimate impact may materially differ from these provisional amounts due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the Tax Act. The company expects to complete its analysis within the measurement period in accordance with SAB 118.

The Company's loss from continuing operations before income taxes for the years ended December 31, was as follows (in thousands):

| | 2017 | 2016 | 2015 |
|--|------------|------------|------------|
| Income (loss) before provision for income taxes: | | | |
| United States | \$(22,748) | \$(14,242) | \$(13,254) |
| Foreign | 5,319 | 2,259 | 629 |
| | \$(17,429) | \$(11,983) | \$(12,625) |

The components of the provision (benefit) for income taxes attributable to continuing operations are as follows (in thousands):

| | 2017 | 2016 | 2015 |
|---------------|---------|---------|--------|
| Current | | | |
| Federal | \$— | \$— | \$— |
| State | 177 | 37 | (100) |
| Foreign | 1,381 | 964 | 932 |
| Total Current | \$1,558 | \$1,001 | \$832 |

| | | | |
|----------------|----------|---------|---------|
| Deferred | | | |
| Federal | \$(168) | \$727 | \$293 |
| State | 128 | 131 | 31 |
| Foreign | (222) | (329) | (117) |
| Total Deferred | (262) | 529 | 207 |
| | \$1,296 | \$1,530 | \$1,039 |

As of December 31, 2017, the Company had federal net operating loss carryforwards of approximately \$181.9 million and research and development credit carryforwards of approximately \$3.9 million. The net operating loss and credit carryforwards will expire beginning in 2018, if not utilized. Utilization of the net operating losses and tax credits may be subject to substantial annual limitation due to the “change of ownership” provisions of the Internal Revenue Code of 1986. The annual limitation will result in the expiration of approximately \$77 million of net operating losses and \$3.9 million of credit carryforwards before utilization.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company’s deferred taxes as of December 31 are as follows (in thousands):

| | 2017 | 2016 | 2015 |
|--|------------|-----------|-----------|
| Deferred tax assets: | | | |
| Accrued expenses and allowances | \$1,715 | \$993 | \$793 |
| Deferred revenue | — | 573 | 671 |
| Stock compensation | 901 | 1,054 | 582 |
| Net operating loss and tax credit carryforwards | 26,810 | 24,895 | 20,871 |
| Capital expenses | 294 | 307 | — |
| Other | 129 | 176 | 196 |
| Valuation allowance for noncurrent deferred tax assets | (15,730) | (24,588) | (18,507) |
| Net deferred tax assets | \$14,119 | \$3,410 | \$4,606 |
| Deferred tax liabilities: | | | |
| Capital expenses | \$— | \$— | \$(2) |
| Deferred revenue | (401) | — | — |
| Prepaid expenses | (58) | (31) | (1) |
| Intangible assets | (15,298) | (5,716) | (6,481) |
| Goodwill | (1,214) | (1,029) | (561) |
| Tax credit carryforwards | (410) | (38) | (379) |
| Net deferred tax liabilities | \$(17,381) | \$(6,814) | \$(7,424) |
| Net deferred taxes | \$(3,262) | \$(3,404) | \$(2,818) |

Due to the uncertainty surrounding the timing of realizing the benefits of its domestic favorable tax attributes in future tax returns, the Company has placed a valuation allowance against its domestic net deferred tax asset, exclusive of goodwill. During the year ended December 31, 2017 and 2016, the valuation allowance decreased by approximately \$8.8 million and increased by approximately \$6.1 million, respectively, due primarily to operations, acquisitions, and the impact of changes in tax law.

At December 31, 2017, we did not provide deferred income taxes on temporary differences resulting from earnings of certain foreign subsidiaries which are indefinitely reinvested. The reversal of these temporary differences could result in additional tax; however, it is not practicable to estimate the amount of any unrecognized deferred income tax liabilities at this time. Deferred income taxes are provided as necessary with respect to earnings that are not indefinitely reinvested.

The Company's provision for income taxes differs from the expected tax expense (benefit) amount computed by applying the statutory federal income tax rate of 34% to income before taxes due to the following:

| | 2017 | 2016 | 2015 |
|-------------------------------------|---------|---------|---------|
| Federal statutory rate | 34.0 % | 34.0 % | 34.0 % |
| State taxes, net of federal benefit | 4.7 % | 1.2 % | 3.5 % |
| Tax credits | 1.0 % | (0.1)% | (0.2)% |
| Effect of foreign operations | 2.1 % | 1.1 % | (2.2)% |
| Stock compensation | 7.9 % | (1.7)% | (2.9)% |
| Permanent items and other | (0.5)% | (1.6)% | (3.3)% |
| Effect of Tax Act | (43.7)% | — % | — % |
| Tax carryforwards not benefited | (12.9)% | (45.7)% | (37.1)% |
| | (7.4)% | (12.8)% | (8.2)% |

Under ASC 740-10, Income Taxes - Overall, the Company periodically reviews the uncertainties and judgments related to the application of complex income tax regulations to determine income tax liabilities in several jurisdictions. The Company uses a "more likely than not" criterion for recognizing an asset for unrecognized income tax benefits or a liability for uncertain tax positions. The Company has determined it has the following unrecognized assets or liabilities related to uncertain tax positions as of December 31, 2017. The Company does not anticipate any significant changes in such uncertainties and judgments during the next 12 months. To the extent the Company is required to recognize interest and penalties related to unrecognized tax liabilities, this amount will be recorded as an accrued liability, (in thousands).

| | |
|---|--------|
| Balance at December 31, 2015 | \$621 |
| Additional based on tax positions related to the current year | — |
| Additions for tax positions of prior years | 84 |
| Reductions for tax positions of prior years | — |
| Settlements | — |
| Balance at December 31, 2016 | \$705 |
| Additional based on tax positions related to the current year | — |
| Additions for tax positions of prior years | — |
| Reductions for tax positions of prior years | (225) |
| Settlements | — |
| Balance at December 31, 2017 | \$480 |

Due to the existence of the valuation allowance, future changes in our unrecognized tax benefits will not materially impact the Company's effective tax rate. If the Company were to recognize unrecognized tax benefits as of

December 31, 2017, \$399,000 would impact the effective tax rate. The Company's assessment of its unrecognized tax benefits is subject to change as a function of the Company's financial statement audit.

The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. As of December 31, 2017, the Company had no accrued interest or penalties related to uncertain tax positions.

The Company and its subsidiaries file tax returns in the U.S. federal jurisdiction and in several state and foreign jurisdictions. The Company is no longer subject to U.S. federal income tax examinations for years ending before December 31, 2014 and is no longer subject to state and local or foreign income tax examinations by tax authorities for years ending before December 31, 2013. The Company is not currently under audit for federal, state or any foreign jurisdictions.

7. Debt

Long-term debt consisted of the following at December 31, 2017 and December 31, 2016 (in thousands):

| | December 31, | |
|--|--------------|----------|
| | 2017 | 2016 |
| Senior secured loans (includes unamortized discount of \$2,668 and \$1,442 at December 31, 2017 and December 31, 2016, respectively, based on imputed interest rate of 7.7%) | \$111,144 | \$47,929 |
| Less current maturities | (2,301) | (2,190) |
| Total long-term debt | \$108,843 | \$45,739 |

Loan and Security Agreements

Fifth Amendment to Credit Facility

On August 2, 2017, the Company amended and expanded its Credit Agreement (the "Credit Facility"). The Company entered into the Credit Facility with Wells Fargo Capital Finance and CIT Bank, N.A. as joint lead arrangers, and including Goldman Sachs Bank USA, Regions Bank, and Citizens Bank, N.A. (collectively, the "Lenders"), with a Fifth Amendment to Credit Agreement (the "Fifth Amendment") that amends that certain Credit Facility dated as of May 14, 2015 among inter alia the Company, certain of its subsidiaries, and each of the Lenders named in the Credit Facility.

As of December 31, 2017, there was (i) none in U.S. revolving loans outstanding under the Credit Agreement, (ii) none drawn on the Canadian revolving credit facility, (iii) \$108.5 million in U.S. term loans outstanding under the Credit Agreement, and (iv) \$5.3 million in Canadian term loans outstanding under the Credit Agreement.

Loans

The Fifth Amendment to the Credit Facility provides for a \$200.0 million credit facility, including (i) a fully drawn \$95.0 million term loan, (ii) a fully available \$40.0 million delayed draw term loan commitment (the "DDTL") (\$20.0 million of which was drawn in conjunction with the acquisition of Qvidian in November, 2017), (iii) a fully available \$10.0 million revolving loan commitment, and (iv) a \$55.0 million uncommitted accordion.

Specifically, the Credit Facility provides for \$95.0 million of term debt comprised of (i) a fully drawn U.S. term loan facility in an aggregate principal amount of \$89.6 million (the "U.S. Term Loan"), and (ii) a fully drawn Canadian term loan facility in an aggregate principal amount of \$5.4 million (the "Canadian Term Loan") (the Canadian Term Loan and the U.S. Term Loan together are referred to as the "Term Loans").

The Credit Facility also provides for the expansion of the Company's delayed draw term facility from \$10.0 million to \$40.0 million (\$20.0 million of which was drawn in conjunction with the acquisition of Qvidian in November, 2017), and for an increase in the Company's uncommitted accordion amount from \$20.0 million to \$55.0 million.

In addition, the Credit Facility also provides for revolvers of \$10.0 million, comprised of (i) a U.S. revolving credit facility in an aggregate principal amount of up to \$9.0 million (the "U.S. Revolver"), and (ii) a Canadian revolving

credit facility in an aggregate principal amount of up to \$1.0 million (the “Canadian Revolver”) (the Canadian Revolver and the U.S. Revolver are referred to as the “Revolver”).

As of December 31, 2017, there were no amounts drawn on its U.S. Revolver or Canadian Revolver loans outstanding under the Credit Facility, and there was \$113.8 million outstanding on the Term Loans comprised of (i) \$108.5 million in the U.S. Term Loan outstanding under the Credit Facility, and (ii) \$5.3 million in the Canadian Term Loan outstanding under the Credit Facility.

Terms of Term Loans

Under the terms of the Fifth Amendment, the Term Loans are repayable, on a quarterly basis by an amount equal to 2.5% per annum on or before June 30, 2019, after which the existing 5.0% per annum is due thereafter until the facility’s maturity date of August 2, 2022.

In addition, the leverage ratio was adjusted to exclude from the definition of Funded Indebtedness up to \$15.0 million of qualified cash in excess of \$2.5 million of qualified cash.

Also, the maximum amount of purchase consideration payable in respect of an individual permitted acquisition increased from \$20.0 million to \$25.0 million and in respect of all permitted acquisitions from \$75.0 million to \$175.0 million. In addition, the amount of permitted indebtedness to sellers of businesses increased from \$16.7 million to \$20.0 million.

Terms of Delay Draw Term Loan

Pursuant to the terms of the Credit Facility, the \$40.0 million DDTL is to be used to finance acquisitions. The DDTL, if all or a portion is drawn, is repayable, on a quarterly basis, by an amount equal to 2.5% per annum on or before June 30, 2019, after which the existing 5.0% per annum is due thereafter until the facility’s maturity date of August 2, 2022.

Terms of Revolver

Loans under the Revolver are available up to the lesser of (i) \$10.0 million (the “Maximum Revolver Amount”) or (ii) the maximum facility amount of \$145.0 million, less the sum of any amount of Revolver usage plus the outstanding balance of the Term Loans and other uses of the capacity made under the Credit Facility (such amount, the “Credit Amount”). The Revolver provides a subfacility whereby the Company may request letters of credit (the “Letters of Credit”) in an aggregate amount not to exceed, at any one time outstanding, \$0.5 million and \$0.25 million, from the U.S and Canadian facilities, respectively. The aggregate amount of outstanding Letters of Credit is reserved against the credit availability under the Maximum Revolver Amount and the Credit Amount.

Loans under the Revolver may be borrowed, repaid and reborrowed until August 2, 2022 (the “Maturity Date”), at which time all amounts borrowed under the Credit Facility must be repaid.

Other Terms of Credit Facility

At the option of the Company, U.S. loans accrue interest at a per annum rate based on (i) the U.S. base rate plus a margin ranging from 3.75% to 4.50% depending on the leverage ratio or (ii) the U.S. LIBOR rate determined in accordance with the Credit Facility (based on 1, 2, 3 or 6-month interest periods) plus a margin ranging from 4.75% to 5.50% depending on the leverage ratio. The U.S. base rate is a rate equal to the highest of (i) the federal funds rate plus a margin equal to 0.5%, the U.S. LIBOR rate for a 1-month interest period plus 1.0%, and (ii) Wells Fargo Capital Finance’s prime rate.

At the option of the Company, the Canadian loans accrue interest at a per annum rate based on (i) the Canadian prime rate or the U.S. base rate plus a margin ranging from 3.75% to 4.50% depending on the leverage ratio or (ii) the U.S. LIBOR rate determined in accordance with the Credit Facility (based on 1, 2, 3 or 6-month interest periods) (or the Canadian Bankers' Acceptance (“Canadian BA”) rate determined in accordance with the Credit Facility for obligations in Canadian dollars) plus a margin ranging from 4.75% to 5.50% depending on the leverage ratio.

Accrued interest on the loans will be paid monthly, or, with respect to loans that are accruing interest based on the U.S. LIBOR rate or Canadian BA rate, at the end of the applicable U.S. LIBOR or Canadian BA interest rate period.

Lenders are entitled to a premium (the "Prepayment Premium") in the event of certain prepayments of the loans in an amount equal to (i) August 2, 2017 to August 1, 2018, 2.0% times the sum of (a) the Maximum Revolver Amount plus (b) the outstanding principal amount of the Term Loans and DDTL on the date immediately prior to the date of the prepayment (such sum, the "Prepayment Amount") (ii) from August 2, 2018 to August 1, 2019, 1.0% times the Prepayment Amount and (iii) from August 2, 2019 to the Maturity Date, 0.0% times the Prepayment Amount. The Company may also be subject to prepayment fees in the case of commitment reductions of the Revolver and also may be obligated to prepay loans upon the occurrence of certain events.

The Company is also obligated to pay other customary servicing fees, letter of credit fees and unused credit facility fees.

The Credit Facility contains customary affirmative and negative covenants. The negative covenants limit the ability of the Company and its subsidiaries to, among other things (in each case subject to customary exceptions for a credit facility of this size and type):

• Incur additional indebtedness or guarantee indebtedness of others;

• Create liens on their assets;

• Make investments, including certain acquisitions;

• Enter into mergers or consolidations;

• Dispose of assets;

• Pay dividends and make other distributions on the Company's capital stock, and redeem and repurchase the Company's capital stock;

• Enter into transactions with affiliates; and

• Prepay indebtedness or make changes to certain agreements.

There are certain financial covenants that became more restrictive starting March 31, 2018. If an event of default occurs, at the election of the Lenders, a default interest rate shall apply on all obligations during an event of default, at a rate per annum equal to 2.00% above the applicable interest rate.

The Credit Facility permits the Company's to buyback up to \$10.0 million of its capital stock, subject to restrictions including a minimum liquidity requirement of \$25.0 million before and after any such buyback.

Interest Rate and Debt Discount

Cash interest costs averaged 6.3% under the new Credit Agreement for the year ended December 31, 2017. In addition, the Company incurred \$1.7 million of financing costs associated with the Credit Agreement in the year ended December 31, 2017. These financing costs will be amortized to non-cash interest expense over the term of the Credit Agreement.

Seller Notes

In May 2013, the Company issued seller notes payable in connection with the acquisition of FileBound. The notes had an aggregate principal amount of \$3.5 million with 5% stated interest. \$3.0 million of the notes were paid in May 2015, and \$500,000 of the notes were paid in May 2016.

Debt Maturities

Under the terms of the Fifth Amendment, future debt maturities of long-term debt excluding debt discounts at December 31, 2017 are as follows, (in thousands):

Year ending December 31:

| | |
|------------|-----------|
| 2018 | \$3,000 |
| 2019 | 4,312 |
| 2020 | 5,750 |
| 2021 | 5,750 |
| 2022 | 95,000 |
| Thereafter | — |
| | \$113,812 |

8. Net Loss Per Share

The following table sets for the computations of loss per share (in thousands, except share and per share amounts):

| | December 31, | | |
|---|--------------|------------|------------|
| | 2017 | 2016 | 2015 |
| Numerators: | | | |
| Net loss attributable to common stockholders | \$(18,725) | \$(13,513) | \$(13,664) |
| Denominator: | | | |
| Weighted-average common shares outstanding, basic and diluted | 18,411,247 | 16,472,799 | 14,939,601 |
| Net loss per common share, basic and diluted | \$(1.02) | \$(0.82) | \$(0.91) |

Due to the net losses for the years ended December 31, 2017, 2016, and 2015, basic and diluted loss per share were the same, as the effect of all potentially dilutive securities would have been anti-dilutive. The following table sets forth the anti-dilutive common share equivalents:

| | December 31, | | |
|--|--------------|-----------|-----------|
| | 2017 | 2016 | 2015 |
| Stock options | 549,907 | 759,719 | 778,385 |
| Restricted stock | 1,047,480 | 839,477 | 513,943 |
| Total anti-dilutive common share equivalents | 1,597,387 | 1,599,196 | 1,292,328 |

9. Commitments and Contingencies

Operating Leases

Future minimum lease payments under operating and capital lease obligations are as follows (in thousands):

| | Capital Leases | Operating Leases | Purchase Commitments |
|---|-------------------|---------------------|-------------------------|
| 2018 | \$1,150 | \$3,103.00 | \$ 3,238 |
| 2019 | 619 | 3,260.00 | — |
| 2020 | 75 | 1,969.00 | — |
| 2021 | — | 765.00 | — |
| 2022 | — | 8.00 | — |
| Thereafter | — | — | — |
| Total minimum lease payments | 1,844 | \$9,105 | \$ 3,238 |
| Less amount representing interest | (228) | | |
| Present value of capital lease obligations | 1,616 | | |
| Less current portion of capital lease obligations | (1,092) | | |
| Long-term capital lease obligations | \$524 | | |

The Company has an outstanding purchase commitment in 2018 for software development services from DevFactory FZ-LLC ("DevFactory") pursuant to a technology services agreement in the amount of \$3.2 million. On March 28, 2017, the Company and DevFactory executed an amendment to extend the initial term of the agreement to December 31, 2021. Additionally, the Company amended the option for either party to renew annually for one additional year. The effective date of the amendment was January 1, 2017. For years after 2018, the purchase commitment amount for software development services will be equal to the prior year purchase commitment increased (decreased) by the percentage change in total revenue for the prior year as compared to the preceding year. For example, if 2018 total revenues increase by 10% as compared to 2017 total revenues, then the 2019 purchase commitment will increase by approximately \$0.4 million from the 2018 purchase commitment amount to approximately \$3.6 million.

Operating leases consists of total office rent expense and a cloud infrastructure commitment to Amazon Web Services. The Company leases office space under operating leases that expire between 2018 and 2022. Total office rent expense for the years ended December 31, 2017, 2016, and 2015 were approximately \$3.8 million, \$2.1 million, and \$1.9 million, respectively. The \$3.8 million office rent expense in 2017 includes approximately \$2.3 million of restructuring charges in conjunction with the closures of the Omtool & RightAnswers offices, the remainder represents \$1.5 million in operating rent expense. Total expense with Amazon Web Services for the years ended December 31, 2017, 2016, and 2015 were approximately \$1.5 million, \$0.4 million, and none, respectively.

The current and long-term portion of capital lease obligations are recorded in other current liabilities and other long-term liabilities line items on the balance sheet, respectively. Capital lease agreements are generally for four years and contain a bargain purchase option at the end of the lease term.

Litigation

In the normal course of business, the Company may become involved in various lawsuits and legal proceedings.

While the ultimate results of these matters cannot be predicted with certainty, management does not expect them to have a material adverse effect on the consolidated financial position or results of operations of the Company.

10. Property and Equipment, Net

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

| | December 31, | |
|---|--------------|----------|
| | 2017 | 2016 |
| Equipment (including equipment under capital lease of \$6,234 and \$6,087 at December 31, 2017 and 2016, respectively) | \$9,861 | \$11,317 |
| Furniture and fixtures (including furniture under capital lease of \$0 at both December 31, 2017 and 2016, respectively) | 263 | 205 |
| Leasehold improvements | 769 | 729 |
| Accumulated depreciation (including for equipment and furniture under capital lease of \$4,329 and \$2,961 at December 31, 2017 and 2016, respectively) | (7,966) | (7,895) |
| Property and equipment, net | \$2,927 | \$4,356 |

Amortization of assets recorded under capital leases is included with depreciation expense. Depreciation and amortization expense on property and equipment was \$2.6 million, \$2.7 million and \$2.3 million for the years ended December 31, 2017, 2016, and 2015, respectively. The Company recorded no impairment of property and equipment and recorded losses on the disposal of property and equipment of \$0.0 million, \$0.2 million, and \$0.0 million during the years ended December 31, 2017, 2016, and 2015.

11. Stockholders' Equity

Common and Preferred Stock

Our certificate of incorporation authorizes shares of stock as follows: 50,000,000 shares of common stock and 5,000,000 shares of preferred stock. The common and preferred stock have a par value of \$0.0001 per share. No shares of preferred stock are issued or outstanding.

Each share of common stock is entitled to one vote at all meetings of stockholders. The number of authorized shares of common stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of shares of capital stock of the Company representing a majority of the votes represented by all outstanding shares of capital stock of the Company entitled to vote. The holders of common stock are also entitled to receive dividends, when, if and as declared by our board of directors, whenever funds are legally available therefore, subject to the priority rights of any outstanding preferred stock. In November 2015, the Company agreed to issue 179,298 shares of common stock valued at approximately \$1,388,000 in connection with the acquisition of Ultriva. In addition, the company issued 45,767 shares of common stock to an employee valued at approximately \$0.4 million. The restricted stock has restrictions which vest at three different events during the year following the acquisition. The grant-date fair value of the shares is recognized over the requisite vesting period, which occurred during 2016.

In March 2016, the Company issued 1,000,000 shares of common stock valued at approximately \$5,700,000 in connection with the acquisition of HipCricket, Inc.

In July, 2016, the Company issued 318,302 shares of common stock valued at approximately \$2,400,000 in connection with the acquisition of LeadLander, Inc.

In November, 2016, the Company issued 24,587 shares of common stock valued at approximately \$200,000 in connection with the acquisition of Ultriva, Inc.

On May 12, 2017, the Company filed a registration statement on Form S-3 (File No. 333-217977) (the "S-3"), to register Upland securities in an aggregate amount of up to \$75.0 million for offerings from time to time. The S-3 was amended on May 22, 2017 and declared effective on May 26, 2017. On June 6, 2017, the Company completed a registered underwritten public offering pursuant to the S-3. The net proceeds of the offering were approximately \$42.7 million, net of issuance costs, in exchange for 2,139,534 shares of common stock.

Stock Compensation Plans

The Company maintains two stock-based compensation plans, the 2010 Stock Option Plan (the "2010 Plan") and the 2014 Stock Option Plan (the "2014 Plan"), which are described below.

2010 Plan

At December 31, 2017, there were 174,823 options outstanding under the 2010 Plan. Following the effectiveness of the Company's 2014 Plan in November 2014, no further awards have been made under the 2010 Plan, although each option previously granted under the 2010 Plan will remain outstanding subject to its terms. Any such shares of common stock that are subject to awards under the 2010 Plan which are forfeited or lapse unexercised and would otherwise have been returned to the share reserve under the 2010 Plan instead will be available for issuance under the 2014 Plan.

2014 Plan

In November 2014, the Company adopted the 2014 Plan, providing for the granting of incentive stock options, as defined by the Internal Revenue Code, to employees and for the grant of non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance units and performance shares to employees, directors and consultants. The 2014 Plan also provides for the automatic grant of option awards to our non-employee directors. As of December 31, 2017, there were 375,084 options outstanding under the 2014 Plan, and shares of common stock reserved for issuance under the 2014 Plan consist of 224,904 shares. In addition, the number of shares available for issuance under the 2014 Plan will be increased annually in an amount equal to the least of (i) 4% of the outstanding Shares on the last day of the immediately preceding Fiscal Year or (ii) such number of Shares determined by the Board. At December 31, 2017, there were 1,047,480 restricted stock shares outstanding under the 2014 Plan. Shares issued upon any stock option exercise under the 2010 Plan or 2014 Plan will be issued from the Company's authorized but unissued shares.

Stock Option Activity

A summary of the Company's stock option activity under all Plans is as follows:

| | Number of Options Outstanding | Weighted- Average Exercise Price | Weighted- Average Remaining Contractual Life (In Years) | Weighted- Average Fair Value per Share |
|--|-------------------------------------|---|---|---|
| Outstanding at December 31, 2014 | 665,210 | \$ 4.39 | 8.78 | \$ 2.37 |
| Options granted | 420,616 | 6.93 | | 6.93 |
| Options exercised | (106,338) | 2.17 | | 2.24 |
| Options forfeited | (201,100) | 5.62 | | 4.99 |
| Outstanding at December 31, 2015 | 778,388 | \$ 5.75 | 8.39 | \$ 5.75 |
| Options granted | 137,586 | 7.74 | | 3.23 |
| Options exercised | (43,101) | 4.93 | | 2.54 |
| Options forfeited | (75,251) | 7.01 | | 3.69 |
| Options expired | (37,903) | 4.94 | | 4.90 |
| Outstanding at December 31, 2016 | 759,719 | \$ 6.06 | 7.73 | \$ 2.84 |
| Options granted | 44,514 | 22.23 | | 7.47 |
| Options exercised | (221,156) | 5.50 | | 5.76 |
| Options forfeited | (32,050) | 10.09 | | 15.03 |
| Options expired | (1,120) | 4.97 | | 2.65 |
| Outstanding at December 31, 2017 | 549,907 | \$ 7.36 | 7.30 | \$ 3.77 |
| Options vested and expected to vest at December 31, 2015 | 769,142 | \$ 5.72 | 8.37 | |
| Options vested and exercisable at December 31, 2015 | 244,631 | \$ 3.78 | 6.91 | |
| Options vested and expected to vest at December 31, 2016 | 747,736 | \$ 6.04 | 7.70 | |
| Options vested and exercisable at December 31, 2016 | 482,731 | \$ 5.41 | 7.25 | |
| Options vested and expected to vest at December 31, 2017 | 545,122 | \$ 7.31 | 7.28 | |
| Options vested and exercisable at December 31, 2017 | 470,368 | \$ 6.46 | 7.10 | |

The aggregate intrinsic value of options vested during the years ended December 31, 2017, 2016, and 2015, was approximately \$2.9 million, \$0.8 million and \$0.6 million, respectively. The aggregate intrinsic value of options outstanding at December 31, 2017, 2016, and 2015, was approximately \$7.9 million, \$2.2 million and \$1.3 million, respectively. The aggregate intrinsic value of options exercised at December 31, 2017, 2016, and 2015, was approximately \$3.5 million, \$0.1 million and \$0.6 million, respectively. The aggregate intrinsic value of options exercisable, vested and expected to vest at December 31, 2017, 2016, and 2015 was approximately \$7.9 million, \$2.2 million and \$1.3 million. The total fair value of employee options vested during the years ended December 31, 2017, 2016, and 2015 was approximately \$1.0 million, \$1.0 million and \$0.8 million, respectively. Unvested shares as of December 31, 2017, 2016, and 2015 have a weighted-average grant date fair value of \$6.69, \$3.45 and \$3.53 per share, respectively.

Total stock-based compensation was approximately \$10.0 million, \$4.3 million, and \$2.7 million for the years ended December 31, 2017, 2016, and 2015, respectively. As of December 31, 2017, \$0.3 million of unrecognized compensation cost related to stock options is expected to be recognized over a weighted-average period of 0.93 years. The Company received approximately \$1.2 million in cash from option exercises under the respective Plans in 2017. The Company issued shares from amounts reserved under the respective Plans upon the exercise of these stock options. The Company does not currently expect to repurchase shares from any source to satisfy such obligation under any of the Company's stock option Plans. The exercise of stock options during the year ended December 31,

2017 resulted in an excess tax deduction of approximately \$736,000. The expected tax benefit of approximately \$155,000 is included as part of the deferred tax asset associated with net operating loss carryforwards, currently fully offset by a valuation allowance.

Restricted Stock Awards

A summary of the Company's restricted stock activity under the 2010 and 2014 Plan is as follows:

| | Number of Restricted Shares Outstanding | Weighted-Average Remaining Vesting Term (Years) | Weighted-Average Grant Date Fair Value | Total Fair Value of Shares Vested During the Year |
|--|--|---|---|---|
| Unvested balances at December 31, 2015 | 513,943 | 2.4 | \$8.15 | |
| Awards granted | 778,097 | | \$7.13 | |
| Awards vested | (385,895) | | \$7.72 | \$3,253,660 |
| Awards forfeited | (66,668) | | \$6.98 | |
| Unvested balances at December 31, 2016 | 839,477 | 1.9 | \$7.55 | |
| Awards granted | 855,665 | | \$17.10 | |
| Awards vested | (588,214) | | \$10.78 | \$12,575,851 |
| Awards forfeited | (59,448) | | \$10.89 | |
| Unvested balances at December 31, 2017 | 1,047,480 | 2.0 | \$13.35 | |

During 2017, 588,214 restricted stock awards vested with a weighted average grant date fair value of \$10.78 per share. For restricted stock awards, grant date fair value is equal to the closing stock price on the day of the event. As of December 31, 2017, \$11.6 million of unrecognized compensation cost related to unvested restricted stock awards is expected to be recognized over a weighted-average period of 2.0 years.

The vesting of restricted stock during the year ended December 31, 2017 resulted in an excess tax deduction of approximately \$3.3 million. The expected tax benefit of approximately \$702,000 is included as part of the deferred tax asset associated with net operating loss carryforwards, currently fully offset by a valuation allowance.

Share-based Compensation

The Company recognized share-based compensation expense from all awards in the following expense categories (in thousands):

| | Year Ended December 31, | | |
|----------------------------|----------------------------|---------|---------|
| | 2017 | 2016 | 2015 |
| Cost of revenue | \$436 | \$44 | \$42 |
| Research and development | 796 | 204 | 203 |
| Sales and marketing | 232 | 105 | 65 |
| General and administrative | 8,513 | 3,980 | 2,431 |
| Total | \$9,977 | \$4,333 | \$2,741 |

12. Employee Benefit Plans

The Company has established two voluntary defined contribution retirement plans qualifying under Section 401(k) of the Internal Revenue Code. The Company made no contributions to the 401(k) plans for the years ended December 31, 2017, 2016, and 2015.

13. Domestic and Foreign Operations

Revenue by geography is based on the ship-to address of the customer, which is intended to approximate where the customers' users are located. The ship-to country is generally the same as the billing country. The Company has operations in the U.S., Canada, and Europe. Information about these operations is presented below (in thousands):

| | December 31, | | |
|--------------------------------------|--------------|----------|----------|
| | 2017 | 2016 | 2015 |
| Revenues: | | | |
| U.S. | \$79,842 | \$62,534 | \$56,778 |
| Canada | 4,379 | 4,090 | 4,280 |
| Other International | 13,731 | 8,143 | 8,853 |
| Total Revenues | \$97,952 | \$74,767 | \$69,911 |
| | | | |
| | December 31, | | |
| | 2017 | 2016 | 2015 |
| Identifiable long-lived assets: | | | |
| U.S. | \$2,768 | \$4,054 | \$5,501 |
| Canada | 145 | 284 | 469 |
| Other International | 14 | 18 | 31 |
| Total identifiable long-lived assets | \$2,927 | \$4,356 | \$6,001 |

14. Related Party Transactions

We are a party to three agreements with companies controlled by a non-management investor in the Company: During the fiscal years ended December 31, 2017, 2016, and 2015, the Company purchased software development services pursuant to a technology services agreement with DevFactory FZ-LLC ("DevFactory"), in the amount of \$2.5 million, \$2.3 million, and \$2.1 million, respectively. In January 2014, the Company issued 1,803,574 shares of common stock to this company in connection with the amendment of such technology services agreement and took a noncash charge of \$11.2 million recorded in research and development expenses. The Company has an outstanding purchase commitment in 2018 for software development services pursuant to a technology services agreement in the amount of \$3.2 million. On March 28, 2017, the Company and DevFactory executed an amendment to the agreement to extend the initial term to December 31, 2021. Additionally, the Company amended the option for either party to renew annually for one additional year. The effective date of the amendment was January 1, 2017. For years after 2018, the purchase commitment amount for software development services will be equal to the prior year purchase commitment increased (decreased) by the percentage change in total revenue for the prior year as compared to the preceding year. For example, if 2018 total revenues increase by 10% as compared to 2017 total revenues, then the 2019 purchase commitment will increase by approximately \$0.4 million from the 2018 purchase commitment amount to approximately \$3.6 million. At December 31, 2017 and December 31, 2016, amounts included in accounts payable owed to this company totaled \$0.6 million in both periods.

The Company purchased services from Crossover, Inc. of approximately \$3.0 million, \$1.8 million, and none during the years ended December 31, 2017, 2016, and 2015, respectively. While there are no purchase commitments with this company, the Company continues to use their services in 2018.

On March 14, 2016, Upland completed its purchase of substantially all of the assets of HipCricket, Inc., a cloud-based mobile messaging software provider, and completed the transfer of its EPM Live product

business. Prior to the transaction, HipCricket was owned by an affiliate of ESW Capital, LLC, which is a shareholder of Upland. Raymond James & Co. provided a fairness opinion to Upland in connection with the transaction. Refer to Note 3 - Acquisitions for a description of the transaction. Relating to this transaction, the Company is providing certain transition services to and receiving certain transition services from the affiliate. The cost offsets earned by the Company for these services during the years ended December 31, 2017 and December 31, 2016 totaled none and \$0.7 million, respectively, and the fees owed to the affiliate by the Company for these services during the years ended December 31, 2017 and December 31, 2016 totaled none and \$0.1 million, respectively.

The Company has an arrangement with a former subsidiary to provide management, human resource/payroll, and administrative services, for which the company received fees during years ended December 31, 2017, 2016, and 2015 totaled \$285,000, \$360,000, and \$360,000, respectively, and are expected to be approximately \$60,000 in 2018.

15. Subsequent Events

The Company has evaluated subsequent events through the date the consolidated financial statements were available for issuance.

16. Quarterly Results (Unaudited)

The following table sets forth our unaudited quarterly condensed consolidated statements of operations data for each of the last eight quarters through December 31, 2017. The data has been prepared on the same basis as the audited consolidated financial statements and related notes included elsewhere in this Annual Report, and you should read the following tables together with such financial statements. The quarterly results of operations include all normal recurring adjustments necessary for a fair presentation of this data. Results of interim periods are not necessarily indicative of results for the entire year and are not necessarily indicative of future results.

| | 2017 Quarters | | | | 2016 Quarters | | | |
|---|---------------|------------|------------|------------|---------------|------------|------------|------------|
| | First | Second | Third | Fourth | First | Second | Third | Fourth |
| (dollars in thousands, except per share data) | | | | | | | | |
| Consolidated Statements of Operations Data: | | | | | | | | |
| Revenue: | | | | | | | | |
| Subscription and support | \$18,135 | \$19,407 | \$23,169 | \$24,756 | \$15,241 | \$16,220 | \$17,029 | \$17,062 |
| Perpetual license | 694 | 1,746 | 856 | 1,050 | 318 | 458 | 332 | 542 |
| Total product revenue | 18,829 | 21,153 | 24,025 | 25,806 | 15,559 | 16,678 | 17,361 | 17,604 |
| Professional services | 1,923 | 2,128 | 2,047 | 2,041 | 2,023 | 1,892 | 1,880 | 1,770 |
| Total revenue | 20,752 | 23,281 | 26,072 | 27,847 | 17,582 | 18,570 | 19,241 | 19,374 |
| Cost of revenue: | | | | | | | | |
| Subscription and support ⁽¹⁾⁽²⁾ | 5,893 | 6,676 | 7,737 | 8,148 | 5,226 | 5,634 | 5,747 | 6,127 |
| Professional services ⁽¹⁾ | 1,135 | 1,327 | 1,376 | 1,355 | 1,624 | 1,106 | 1,045 | 1,056 |
| Total cost of revenue | 7,028 | 8,003 | 9,113 | 9,503 | 6,850 | 6,740 | 6,792 | 7,183 |
| Gross profit | 13,724 | 15,278 | 16,959 | 18,344 | 10,732 | 11,830 | 12,449 | 12,191 |
| Operating expenses: | | | | | | | | |
| Sales and marketing ⁽¹⁾ | 3,221 | 4,037 | 4,258 | 3,791 | 3,069 | 2,953 | 3,097 | 3,041 |
| Research and development ⁽¹⁾ | 3,477 | 4,003 | 4,092 | 4,223 | 3,910 | 4,054 | 3,737 | 3,218 |
| Refundable Canadian tax credits | (117) | (112) | (195) | (118) | (109) | (116) | (115) | (173) |
| General and administrative ⁽¹⁾ | 5,904 | 6,576 | 5,084 | 5,727 | 4,123 | 4,547 | 4,670 | 4,946 |
| Depreciation and amortization | 1,164 | 1,299 | 1,648 | 2,387 | 1,472 | 1,476 | 1,322 | 1,021 |
| Acquisition-related expenses | 3,691 | 2,278 | 4,399 | 4,724 | 2,428 | 1,380 | 1,047 | 728 |
| Total operating expenses | 17,340 | 18,081 | 19,286 | 20,734 | 14,893 | 14,294 | 13,758 | 12,781 |
| Loss from operations | (3,616) | (2,803) | (2,327) | (2,390) | (4,161) | (2,464) | (1,309) | (590) |
| Other expense: | | | | | | | | |
| Interest expense, net | (935) | (1,160) | (2,277) | (2,210) | (561) | (662) | (709) | (849) |
| Loss on debt extinguishment | | (1,634) | 1,634 | — | | | | |
| Other expense, net | (112) | (18) | (130) | 549 | (748) | (293) | (64) | 427 |
| Total other expense | (1,047) | (2,812) | (773) | (1,661) | (1,309) | (955) | (773) | (422) |
| Loss before provision for income taxes | (4,663) | (5,615) | (3,100) | (4,051) | (5,470) | (3,419) | (2,082) | (1,012) |
| Provision for income taxes | (951) | (196) | (406) | 257 | (103) | (158) | (308) | (961) |
| Net loss | \$(5,614) | \$(5,811) | \$(3,506) | \$(3,794) | \$(5,573) | \$(3,577) | \$(2,390) | \$(1,973) |
| Net loss per common share: | | | | | | | | |
| Loss from continuing operations per common share, basic and diluted | \$(0.33) | \$(0.33) | \$(0.18) | \$(0.19) | \$(0.36) | \$(0.22) | \$(0.14) | \$(0.12) |

(1) includes non-cash stock-based compensation

(2) Includes depreciation and amortization

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

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer (our principal executive officer and principal financial officer, respectively), we have evaluated our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 as of December 31, 2017. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that, as of December 31, 2017, the Company's disclosure controls and procedures were effective in ensuring information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and is accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures will prevent or detect all errors and all fraud. Disclosure controls and procedures, no matter how well designed, operated and managed, can provide only reasonable assurance that the objectives of the disclosure controls and procedures are met. Because of the inherent limitations of disclosure controls and procedures, no evaluation of such disclosure controls and procedures can provide absolute assurance that all control issues and instances of fraud, if any, have been detected.

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 such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate. Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in Internal Control - Integrated Framework (2013).

Based on our evaluation using those criteria, our management has concluded that, as of December 31, 2017, our internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm on our internal control over financial reporting due to an exemption established by the JOBS Act for "emerging growth companies."

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fourth quarter of fiscal 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Officers and Corporate Governance

We have adopted a code of ethics that applies to the Company's directors, officers and employees, including the Chief Executive Officer and the Chief Financial Officer and any other persons performing similar functions. The text of our code of ethics, "Code of Business Conduct and Ethics," has been posted on our website at <http://investor.uplandsoftware.com/code-of-conduct>. We will provide a copy of the code of ethics without charge upon request to Corporate Secretary, Upland Software, Inc., 401 Congress Ave., Suite 1850, Austin, Texas 78701. Additional information required by this item is incorporated by reference from our definitive proxy statement for the 2018 Annual Meeting of Stockholders under the headings "Proposal One: Election of Directors," "Section 16(a) Beneficial Ownership Reporting Compliance," "Directors and Corporate Governance" and "Executive Officers."

Item 11. Executive Compensation

The information required by this item is incorporated by reference from our definitive proxy statement for the 2018 Annual Meeting of Stockholders, under the headings "Executive Compensation" and "Directors and Corporate Governance-Compensation Committee Interlocks and Insider Participation."

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

The information required by this item is incorporated by reference from our definitive proxy statement for the 2018 Annual Meeting of Stockholders under the headings "Equity Compensation Plan Information" and "Security Ownership of Certain Beneficial Owners and Management."

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

The information required by this item is incorporated by reference from our definitive proxy statement for the 2018 Annual Meeting of Stockholders under the headings "Certain Relationships and Related Party Transactions" and "Directors and Corporate Governance-Director Independence."

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference from our definitive proxy statement for the 2018 Annual Meeting of Stockholders under the heading "Proposal Two: Ratification of Selection of Independent Registered Public Accounting Firm."

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements

The financial statements filed as part of this Annual Report on Form 10-K are listed on the "Index to Consolidated Financial Statements" included in Item 8 herein.

(b) Exhibits

See Exhibit Index at the end of this Annual Report on Form 10-K, which is incorporated by reference.

Item 16. Form 10-K Summary

Not applicable.

Schedule II-Valuation and Qualifying Accounts

This schedule has been omitted as the required information has been included in the notes to the consolidated financial statements.

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EXHIBIT INDEX

| Exhibit No. | Description of Exhibit | Incorporated by Reference | | |
|----------------|---|---------------------------|-------------------|---------------------|
| | | Form | File No. | Exhibit Filing Date |
| <u>2.1</u> | <u>Agreement and Plan of Merger by and among the Registrant, Steering Wheel Acquisition Corp., PowerSteering Software, Inc. and Michael Pehl, as Stockholder representative, dated February 3, 2012</u> | S-1 | 333-1985742.1 | September 4, 2014 |
| <u>2.2</u> | <u>Stock Purchase Agreement by and among the Registrant, Tenrox Inc., the stockholders named therein and Novacap II, L.P. and Aramazd Israilian, as representatives, dated February 10, 2012</u> | S-1 | 333-1985742.2 | September 4, 2014 |
| <u>2.3</u> | <u>Membership Interest Purchase Agreement by and among the Registrant, LMR Solutions, LLC, Joseph Larscheid and Cheryl Larscheid, dated November 13, 2012</u> | S-1 | 333-1985742.3 | September 4, 2014 |
| <u>2.4</u> | <u>Stock Purchase Agreement by and among the Registrant, Marex Group Inc., FileBound Solutions, Inc., the Selling Stockholders (as defined therein) and Rex Lamb, as representative of the Selling Stockholders, dated May 16, 2013</u> | S-1 | 333-1985742.4 | September 4, 2014 |
| <u>2.5</u> | <u>Membership Interest Purchase Agreement by and among the Registrant, Upland Software, Inc., ComSci, LLC and Robert Svec, dated November 7, 2013</u> | S-1 | 333-1985742.5 | September 4, 2014 |
| <u>2.6</u> | <u>Stock Purchase Agreement by and among the Registrant, Clickability, Inc. and Limelight Networks, Inc. dated December 23, 2013</u> | S-1 | 333-1985742.6 | September 4, 2014 |
| <u>2.7</u> | <u>Agreement and Plan of Merger by and among Upland Software, Inc., Ovidian Corporation, Quest Acquisition Corporation I and Christian Meininger, as Securityholder Representative, dated as of November 16, 2017</u> | 8-K | 001-36720 10.1 | November 16, 2017 |
| <u>3.1</u> | <u>Amended and Restated Certificate of Incorporation, as currently in effect</u> | 10-K | 001-36720 3.1 | March 30, 2016 |
| <u>3.2</u> | <u>Amended and Restated Bylaws, as currently in effect</u> | 10-K | 001-36720 3.2 | March 30, 2016 |
| <u>4.1</u> | <u>Amended and Restated Investors' Rights Agreement among the Registrant and certain stockholders, dated December 20, 2013</u> | S-1 | 333-1985744.1 | September 4, 2014 |
| <u>10.1+</u> | <u>Form of Indemnification Agreement for directors and officers</u> | S-1 | 333-198574 10.2 | October 27, 2014 |
| <u>10.2+</u> | <u>Amended and Restated 2010 Stock Plan, as amended September 2, 2014</u> | S-1 | 333-198574 10.3.1 | September 4, 2014 |
| <u>10.3+</u> | <u>Form of Stock Option Agreement under Amended and Restated 2010 Stock Plan (Standard)</u> | S-1 | 333-198574 10.4 | September 4, 2014 |
| <u>10.3.1+</u> | <u>Form of Stock Option Agreement under Amended and Restated 2010 Stock Plan (Former ComSci, LLC Employees)</u> | S-1 | 333-198574 10.4.1 | September 4, 2014 |
| <u>10.3.2+</u> | <u>Form of Stock Option Agreement under Amended and Restated 2010 Stock Plan (Executive)</u> | S-1 | 333-198574 10.4.2 | September 4, 2014 |
| <u>10.3.3+</u> | <u>Form of Amendment to Stock Option Agreement under Amended and Restated 2010 Stock Plan with Certain Executives</u> | S-1 | 333-198574 10.4.3 | September 4, 2014 |
| <u>10.4+</u> | <u>Form of Restricted Stock Purchase Agreement under Amended and Restated 2010 Stock Plan</u> | S-1 | 333-198574 10.5 | September 4, 2014 |
| <u>10.4.1+</u> | <u>Form of Amendment to Restricted Stock Purchase Agreement under Amended and Restated 2010 Stock Plan</u> | S-1 | 333-198574 10.5.1 | September 4, 2014 |
| <u>10.5+</u> | <u>2014 Equity Incentive Plan</u> | S-1 | 333-198574 10.6 | October 27, 2014 |

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| | | | | Incorporated by Reference |
|----------------|---|------|--------------------|---------------------------|
| <u>10.6+</u> | <u>Form of Stock Option Award Agreement under 2014 Equity Incentive Plan</u> | S-1 | 333-198574 10.7 | October 27, 2014 |
| <u>10.6.1+</u> | <u>Form of Stock Option Award Agreement under 2014 Equity Incentive Plan (Executive)</u> | S-1 | 333-198574 10.7.1 | October 27, 2014 |
| <u>10.7+</u> | <u>Form of Restricted Stock Purchase Agreement under 2014 Equity Incentive Plan</u> | S-1 | 333-198574 10.8 | October 27, 2014 |
| <u>10.7.1+</u> | <u>Form of Restricted Stock Purchase Agreement under 2014 Equity Incentive Plan (Executive)</u> | S-1 | 333-198574 10.8.1 | October 27, 2014 |
| <u>10.8+</u> | <u>Form of Restricted Stock Unit Award Agreement under 2014 Equity Incentive Plan</u> | S-1 | 333-198574 10.9 | October 27, 2014 |
| <u>10.8.1+</u> | <u>Form of Restricted Stock Unit Award Agreement under 2014 Equity Incentive Plan (Executive)</u> | S-1 | 333-198574 10.9.1 | October 27, 2014 |
| <u>10.9+</u> | <u>Employment Agreement between the Registrant and John T. McDonald, dated May 9, 2014</u> | S-1 | 333-198574 10.12 | September 4, 2014 |
| <u>10.10+</u> | <u>Offer of Employment between the Registrant and Timothy Mattox, dated July 7, 2014</u> | 10-K | 001-36720 10.13 | March 31, 2015 |
| <u>10.11</u> | <u>Office Lease between the Registrant and TPG-401 Congress LLC, dated February 27, 2014</u> | S-1 | 333-198574 10.17 | September 4, 2014 |
| <u>10.11.1</u> | <u>First Amendment to Office Lease between Registrant and TPG-401 Congress LLC</u> | S-1 | 333-198574 10.17.1 | September 4, 2014 |
| <u>10.12</u> | <u>Lease Agreement between Tenrox Inc. and A.R.E. Quebec, dated November 5, 2012, as amended</u> | S-1 | 333-198574 10.18 | September 4, 2014 |
| <u>10.13</u> | <u>Sublease Agreement between Marex Properties, LLC and Marex Group Inc., dated May 10, 2013</u> | S-1 | 333-198574 10.19 | September 4, 2014 |
| <u>10.14</u> | <u>Amended and Restated Technology Services Agreement between the Registrant and DevFactory FZ-LLC, dated January 1, 2014</u> | S-1 | 333-198574 10.37 | October 27, 2014 |
| <u>10.14.1</u> | <u>Second Amended and Restated Technology Services Agreement between the Registrant and DevFactory FZ-LLC, dated January 1, 2017</u> | 10-K | 001-36720 10.18.1 | March 30, 2017 |
| <u>10.16</u> | <u>Stock Purchase Agreement between the Registrant and DevFactory FZ-LLC, dated January 27, 2014</u> | S-1 | 333-198574 10.39 | September 4, 2014 |
| <u>10.17</u> | <u>Lease by and between Lincoln One, LLC and the Registrant dated June 19, 2015</u> | 8-K | 001-36720 10.1 | June 22, 2015 |
| <u>10.18</u> | <u>Credit Agreement by and between the Registrant and Wells Fargo Finance, dated May 14, 2015</u> | 10-Q | 001-36720 10.1 | August 14, 2015 |
| <u>10.18.1</u> | <u>First Amendment to Credit Agreement, among the Registrant, Wells Fargo Bank, N.A. and the other parties thereto, dated September 23, 2015.</u> | 10-K | 001-36720 10.18.1 | March 30, 2017 |
| <u>10.18.2</u> | <u>Second Amendment to Credit Agreement, among the Registrant, Wells Fargo Bank, N.A. and the other parties thereto, dated April 25, 2016.</u> | 10-K | 001-36720 10.18.2 | March 30, 2017 |
| <u>10.18.3</u> | <u>Third Amendment to Credit Agreement, among the Registrant, Wells Fargo Bank, N.A. and the other parties thereto, dated November 15, 2016.</u> | 10-K | 001-36720 10.18.3 | March 30, 2017 |
| <u>10.18.4</u> | <u>Fourth Amendment to Credit Agreement, among the Registrant, Wells Fargo Bank, N.A. and the other parties thereto, dated April 21, 2017</u> | 10-Q | 001-36720 10.1 | August 14, 2017 |
| <u>10.18.5</u> | <u>Fifth Amendment to Credit Agreement, among the Registrant, Wells Fargo Bank, N.A. and the other parties thereto, dated August 2, 2017</u> | 10-Q | 001-36720 10.1 | November 14, 2017 |
| <u>10.19</u> | | 10-Q | 001-36720 10.2 | |

Guaranty and Security Agreement by and between the Registrant and
Wells Fargo Capital Finance, dated May 14, 2015

August 14,
2015

| | Incorporated by Reference | | |
|-----------------|--|---------------------|-----------------|
| <u>10.20</u> | <u>Canadian Guarantee and Security Agreement by and between the Registrant and Wells Fargo Capital Finance, dated May 14, 2015</u> | 10-Q001-36720 10.3 | August 14, 2015 |
| <u>10.21+</u> | <u>Employment Agreement between the Registrant and Michael D. Hill, dated March 28, 2017</u> | 10-K001-36720 10.21 | March 30, 2017 |
| <u>10.22+</u> | <u>Employment Agreement between the Registrant and Timothy Mattox, dated March 28, 2017</u> | 10-K001-36720 10.22 | March 30, 2017 |
| <u>10.23+</u> | <u>Employment Agreement between the Registrant and John T. McDonald, dated March 28, 2017</u> | 10-K001-36720 10.23 | March 30, 2017 |
| <u>21.1*</u> | <u>List of subsidiaries of Upland Software, Inc.</u> | | |
| <u>23.1*</u> | <u>Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm</u> | | |
| <u>24.1*</u> | <u>Power of Attorney (included on signature pages hereto)</u> | | |
| <u>31.1*</u> | <u>Certification of the Principal Executive Officer Required Under Rules 13a-14(a) and 15d-14(a) of the Securities Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u> | | |
| <u>31.2*</u> | <u>Certification of the Principal Financial Officer Required Under Rules 13a-14(a) and 15d-14(a) of the Securities Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u> | | |
| <u>32.1*(1)</u> | <u>Certification of Principal Executive Officer Required Under Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u> | | |
| <u>32.2*(1)</u> | <u>Certification of Principal Financial Officer Required Under Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u> | | |
| 101.INS | XBRL Instance Document | | |
| 101.SCH | XBRL Taxonomy Extension Schema | | |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase | | |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase | | |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase | | |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase | | |

+ Indicates management contract, compensatory plan or arrangement.

* Filed herewith.

(1) The material contained in Exhibit 32.1 and Exhibit 32.2 is not deemed “filed” with the SEC and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing, except to the extent that the Company specifically incorporates it by reference.

SIGNATURES

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

Date: March 9, 2018

Upland Software, Inc.

By: /s/ John T. McDonald

John T. McDonald

Chief Executive Officer and Chairman

POWER OF ATTORNEY

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

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

| Signature | Title | Date |
|--|--|---------------|
| /s/ John T. McDonald John T. McDonald | Chief Executive Officer and Chairman (Principal Executive Officer) | March 9, 2018 |
| /s/ Michael D. Hill Michael D. Hill | Chief Financial Officer, Secretary and Treasurer (Principal Financial Officer and Principal Accounting Officer) | March 9, 2018 |
| /s/ Joe C. Ross Joe C. Ross | Director | March 9, 2018 |
| /s/ David May David May | Director | March 9, 2018 |
| /s/ Stephen E. Courter Stephen E. Courter | Director | March 9, 2018 |
| /s/ Rodney C. Favaron Rodney C. Favaron | Director | March 9, 2018 |