

Upland Software, Inc.
Form 10-K
March 15, 2019

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, 2018

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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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Large accelerated filer " Accelerated filer x

Non-accelerated filer " Smaller reporting company "

Emerging growth company x

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

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$568 million based upon the closing price of \$34.37 of such common stock on the Nasdaq Global Market on June 29, 2018 (the last business day of the registrant's most recently completed second fiscal quarter). Shares of common stock held as of June 29, 2018 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, 2019, 21,494,738 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 2019 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

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 plans regarding future acquisitions and our ability to consummate and integrate acquisitions;
- our ability to obtain financing in the future on acceptable terms or at all;
- our expectations with respect to revenue, cost of revenue and operating expenses in future periods;
- our ability to attract and retain customers;
- our ability to successfully enter new markets and manage our international expansion;
- our ability to comply with privacy laws and regulations;
- 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;
- 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 adapt to changing market conditions and competition;
- 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 expectations with regard to trends, such as seasonality, which affect our business;
- 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.
- the operation and reliability of our third-party data centers; and
- our expectations as to the payment of dividends;

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

Upland provides cloud-based enterprise work management software that enables organizations to plan, manage and execute projects and work. Our software applications address enterprise work challenges in the following enterprise solution categories:

Customer Experience Management. Upland Customer Experience Management, or CXM, solutions enable organizations to manage customer relationships across multiple channels - including email, short message service, or SMS, multimedia messaging service, or MMS, web, social, and mobile apps. Upland products within this solution suite include Upland Mobile Messaging, Rant & Rave, Adestra, and RightAnswers.

Sales Enablement. Upland Sales Enablement solutions enable sales organizations to automate delivery of processes, sales activities, content, systems, and metrics at multiple stages of the sales process. Upland products within this solution suite include Qvidian, RO Innovation, and LeadLander.

Professional Services Automation. Upland Professional Services Automation, or PSA, solutions enable service organizations to manage professional services delivery and related functions. Upland products within this solution suite include Tenrox, RightAnswers, FileBound, RO Innovation, and Qvidian.

Project and Financial Management. Upland Project and Financial Management solutions enable enterprises to manage project portfolios and track, analyze and manage information technology (“IT”), cloud, and telecom spending. Upland products within this solution suite include PowerSteering, Eclipse PPM, RightAnswers, and ComSci.

Enterprise Knowledge Management. Upland Enterprise Knowledge Management, or KM, solutions enable knowledge-sharing across different departments within an enterprise. Upland products within this solution suite include RightAnswers, Tenrox, and PowerSteering.

Secure Document Services. Upland Secure Document Services solutions enable enterprises to manage and automate document intensive business processes with data security through scan and fax platforms, data monitoring and breach prevention capabilities, and the automated routing of content to its final destination. Upland products within this solution suite include AccuRoute, FileBound, and InterFAX.

Document Lifecycle Automation. Upland Document Lifecycle solutions enable users to digitize, organize, automate, integrate, analyze and optimize high volume processes. Upland products within this solution suite include AccuRoute, FileBound, Qvidian, and RO Innovation.

Our customers currently use our applications in the following functional areas:

Project Management. Business leaders and Project Management Offices, or PMOs, use our applications to optimize project portfolios, balance capacity against demand, improve financial-based decision making, align execution of projects to strategy across large organizations, and manage the entire project delivery lifecycle. Our applications deliver value to project management across a variety of use cases including continuous improvement, enterprise IT, new product development, and services departments along with industry depth in higher education, public sector, and healthcare IT.

Information Technology. IT departments use our applications to manage a variety of IT activities and resources across the enterprise. 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.

Business Operations. Different functional departments use our applications to streamline operations and accelerate business performance across their value chain. Upland solutions in this area range from supply chain collaboration and factory management, back office document and vendor management, to applications that improve sales responsiveness.

Sales and Marketing. Sales and marketing teams employ our applications to drive growth through deeper customer engagement, reduced sales cycle times, and overall improved collaboration between sales, marketing, and other customer-facing functions. We offer applications that help organizations to build their online and mobile brand presence, engage their target audiences across multiple communications channels, collaborate on the creation and publication of content, and gain increased control over marketing workflows, activities, and budgets.

Call Center. Customer service and support environments use our applications to enable agents to resolve issues and to engage customers. We offer applications that improve customer experience and reduce call volume and cycle times through customer self-service tools and Voice of Customer, or VoC, technology that captures customer sentiment in real-time. Upland also offers tools that improve call center agent productivity by providing more direct access to knowledge and to customer sentiment thereby improving both inbound call outcomes and proactive outbound success. Additional solutions help call center leadership to manage agent performance and measure real-time performance relative to call resolution and customer sentiment, improve performance through gamification, and gather agent feedback to keep employee engagement high.

Human Resources and Legal. Human resources, or HR, legal departments, and law firms use our applications to improve collaboration and operational control and streamline routine processes. We offer applications that automate document management and workflow including, contracts, records, and other documentation that require enhanced security and compliance requirements. Other applications support HR-specific workflows including onboarding, employee management, termination, HR support, and time and expense management.

Through a series of acquisitions and integrations, we have built a diverse family of software applications under the Upland brand that are delivered through seven enterprise solution suites, each of which addresses a specific enterprise work management need. For the twelve months ended December 31, 2018, compared to the twelve months ended December 31, 2017, our total revenue grew from \$98.0 million to \$149.9 million, representing a 53% period-over-period growth rate. For the twelve months ended December 31, 2018, compared to the twelve months ended December 31, 2017, our subscription and support revenue grew from \$85.5 million to \$136.6 million, representing a 60% period-over-period growth rate. See Note 12 Revenue Recognition, of the Notes to Consolidated Financial Statements for more information regarding our revenue as it relates to domestic and foreign operations. To support continued growth, we intend to continue to pursue acquisitions within our core enterprise solution suites of complementary technologies and businesses. This will expand our customer base and market access, resulting in increased benefits of scale. Consistent with our growth strategy, we have made a total of 20 acquisitions in the 7 years ending December 31, 2018.

The operating platform that we use to transform acquired companies and maintain a consistently high level of operating performance is called UplandOne. This platform consists of six key areas:

High-Touch Customer Success Program. Customer success is a continuous journey based on open communication and establishing clear goals towards value realization and maximum customer success. To achieve this, we have institutionalized a set of unique customer commitments and deliverables we call the Upland Customer Success Program that includes onboarding and training, a dedicated customer success representative, upgraded success plans, quarterly virtual user conferences, periodic executive outreach and Net Promoter Score, or NPS, surveys, and an ongoing customer feedback loop.

Quality-Focused R&D. Our approach to R&D at Upland is straight-forward: prioritize customer need, leverage a metrics-driven agile approach with visibility and accountability, and deploy the most up-to-date development systems to ensure quality is built into every step of development.

Customer-Driven Innovation. Customer feedback is at the heart of the Upland customer experience. New features are added and prioritized in our product roadmaps, and then fine-tuned, based on direct customer input. Requests from our Premier Success Plan customers are given additional priority weighting for new features and minor issue resolution. Product feedback outlets include customer success account management, quarterly virtual user conferences, annual customer advisory boards, and Upland's online communities.

Expert Professional Services. Through our Professional Services organization, Upland is committed to delivering the most value from a customer's Upland investment in the shortest possible time. Once we engage on a project, we dedicate a team to the planning, configuration, integration, launch, administration and maintenance of the application. 24x7 Global Support. Upland Global support includes: prioritized issue escalation and resolution; online and phone support, 24/7/365; access to a community to share and discuss best practices, support tips, training materials, and custom reports; a knowledge-base with alerts, service recommendations, and troubleshooting content; unlimited case submissions and real-time case updates; and full support across the globe. For customers

that have more urgent support requirements, Upland Premier Success Plans provide enhanced response times and availability for the most severe support requests.

Enterprise Cloud Platform. Upland's products run on an enterprise-class cloud environment - delivering power, reliability, and flexibility. We utilize Amazon Web Services, or AWS, for all our cloud-based products and move acquired products to AWS in connection with our acquisition integration program. Upland's cloud technology gives customers the freedom from legacy applications without having to compromise security or scalability. Our applications are scalable and can support large deployments while maintaining required performance levels.

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, 2018, 2017 and 2016, our subscription and support revenue accounted for 91%, 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, 2018, 2017 and 2016, our perpetual license revenue accounted for 3%, 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, 2018, 2017 and 2016, our professional services revenue accounted for 6%, 9% and 10% of total revenue, respectively.

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 9,000 customers, with no customer accounting for more than 3% of our revenue.

Diversified family of software solutions. We offer a family of cloud-based enterprise work management software solutions 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.

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 20 acquisitions we have completed since the beginning of 2012. We believe that our acquisition experience and strategy give 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 effort 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, as defined in "Item 7. - Management's Discussion and Analysis" herein, was 98% as of December 31, 2018. 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 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:

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 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 give 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 solution categories we currently offer.

Increase sales to existing customers. We believe there is a significant opportunity to expand the adoption of our applications within our 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.

Expand globally. We believe there is an opportunity to grow sales of our applications globally. During the years ended December 31, 2018, 2017, and 2016, approximately 22%, 18%, and 16%, 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.

Customers

We service customers ranging from large global corporations and government agencies to small- and medium-sized businesses. 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. For the year ended December 31, 2018 approximately 80% of our recurring revenue was generated from what we consider to be major accounts, those customers with contracted annual recurring revenue of \$25,000 or more. No customer represented more than 3% of our revenue for the year ended December 31, 2018.

Sales

We sell 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.

Marketing

Our marketing activities are designed to build awareness of the Upland brand and the solutions 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 products, 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 24/7/365 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. These service offerings include:

Health Checks and Program Reviews where we engage core users and business buyer sponsors to deliver a detailed scorecard and recommendation report.

Advisory and Retained Services that provide our customers with access to a specific customer success contact with priority scheduling and periodic checkpoints.

System Deployment and Adoption Analysis programs to analyze system configuration and usage patterns, resulting in best practice recommendations on improving user adoption and compliance.

Consumption Review and Recommendations designed to deliver 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 that provide a bundled services, support, and product experience offering with three tiers (standard, gold and platinum) designed to provide maximum customer value.

Executive Outreach where we promote 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 have partnered with AWS to provide the hardware and infrastructure necessary to provide our services to our customers. AWS facilities provide 24/7/365 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 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.

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 compete against larger enterprise software companies that provide a full suite of Software as a Service, or SaaS, solutions focused on the functional areas we serve or the problems our solutions address. 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.

Backlog

Backlog represents future billings under our non-cancelable agreements that have not been invoiced or paid and, accordingly, not recorded in deferred revenue. Until such time as these amounts are invoiced or paid, they are not recorded in revenues, deferred revenue or elsewhere in our consolidated financial statements. As of December 31, 2018 our backlog was approximately \$65.7 million.

Our subscription contracts are generally 1 to 3 years in length, and therefore the substantial majority of our backlog is expected to be recognized as revenue within the one-year contract term. Revenue for any period is a function of revenue recognized from deferred revenue, backlog under contracts in existence at the beginning of the period, as well as contract renewals and new customer contracts during the period. As a result, our backlog at the beginning of any period is not necessarily indicative of our future performance. Our presentation of backlog may differ from other companies in our industry.

Employees

As of December 31, 2018, we had 667 employees, with the majority of our employees located in the United States, Canada and the United Kingdom. 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.

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 (512) 960-1010. 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. 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

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 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 667 as of December 31, 2018, and have also increased the size of our customer base. In addition, our revenue grew from \$712,000 in 2011 to \$149.9 million in 2018. 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 2012; the businesses of FileBound Solutions, Inc. and Marex Group Inc., ComSci, LLC, and Clickability Inc. in 2013; the businesses of Solution Q Inc. and Mobile Commons, Inc. in 2014; Ultriva Inc. in 2015; and the businesses of LeadLander, Inc., HipCricket, Inc., and Advanced Processing and Imaging, Inc. in 2016. In 2017, we acquired the businesses of Omtool, Ltd., RightAnswers, Inc., Waterfall International, Inc., and Qvidian Corporation. In 2018, we acquired the businesses of Interfax Communications Ltd, References-Online, Inc., Rapide Communication Ltd. (“Rant & Rave”), and Aestra Ltd. 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 announcement or adoption of new regulations and policy mandates or changes to existing regulations and policy mandates;
- future accounting pronouncements or changes in our accounting policies;
- unforeseen litigation and intellectual property infringement;
- 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 December 12, 2018, we expanded into a \$400.0 million loan facility with Wells Fargo Capital Finance. The facility is comprised of a \$285.0 million term loan, a \$30.0 million revolving credit facility and a \$30.0 million delayed draw term loan for acquisitions, of which none has been drawn to date. 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. Because of our limited experiences with international operations, any international efforts that we may undertake may not be successful in creating demand for our applications outside of the U.S. or in effectively selling subscriptions to our solutions in all of the international markets that we enter. 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;
- different pricing environments, 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;
- sales and customer service challenges associated with operating in different countries;
- 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.

Actual or perceived security vulnerabilities in our solutions and services or cyberattacks on our networks could have a material adverse impact on our business, results of operations and financial condition.

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, such as Amazon Web Services) 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. Unauthorized parties may attempt to misappropriate or compromise our confidential information or that of third parties, create system disruptions, product or service vulnerabilities or cause shutdowns. These perpetrators of cyberattacks also may be able to develop and deploy viruses, worms, malware and other malicious software programs that directly or indirectly attack our products, services or infrastructure (including our third party cloud service providers). 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. In addition, to the extent we are diverting our resources to address and mitigate these vulnerabilities, it may hinder our ability to deliver and support our solutions and customers in a timely manner. Despite our efforts to build secure services, we can make no assurance that we will be able to detect, prevent, timely and adequately address, or mitigate the negative effects of cyberattacks or other security breaches.

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, 2018, we had federal net operating loss carryforwards of approximately \$204.8 million and research and development credit carryforwards of approximately \$3.5 million, which begin expiring in 2019. 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 \$82.6 million of federal net operating losses and \$3.5 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. As of December 31, 2018 we also had foreign net operating loss carryforwards of approximately \$24.8 million, which carry forward indefinitely.

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 December 31, 2019 or the date on which we have, during the previous three-year period, issued more than \$1 billion in non-convertible debt securities. 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 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.

The uncertainty surrounding the implementation and effect of Brexit may cause increased economic volatility, affecting our operations and business.

On June 23, 2016, voters in the United Kingdom (“UK”) approved an advisory referendum to withdraw from membership in the European Union (“E.U.”), this proposed exit (referred to as Brexit) could cause disruptions to, and create uncertainty surrounding, our business in the UK and E.U., including affecting our relationships with our existing and future customers, suppliers and employees. As a result, Brexit could have an adverse effect on our future business, financial results and operations. The formal process for the UK leaving the E.U. began in March 2017, when the UK served notice to the European Council under Article 50 of the Treaty of Lisbon. The long-term nature of the UK’s relationship with the E.U. is unclear and there is considerable uncertainty as to when any relationship will be agreed upon and implemented. The announcement of Brexit has resulted in significant volatility in global stock market and currency exchange rate fluctuations that resulted in strengthening of the U.S. dollar relative to other foreign currencies in which we conduct business. The political and economic instability created by Brexit has caused and may continue to cause significant volatility in global financial markets and uncertainty regarding the regulation of data protection in the UK. Brexit could also have the effect of disrupting the free movement of goods, services, and people between the UK, the E.U., and elsewhere. The effects of Brexit will depend on any agreements the UK makes to retain access to E.U. markets either during a transitional period or more permanently. Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the UK determines which E.U. laws to replace or replicate. Further, uncertainty around these and related issues could lead to adverse effects on the economy of the UK and the other economies in which we operate. There can be no assurance that any or all of these events will not have a material adverse effect on our business operations, results of operations and financial condition.

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 December 12, 2018, we filed a shelf registration statement on Form S-3. If we 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. 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, 2018, 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 June 2025. We also lease office facilities domestically located in California, Massachusetts, Nebraska, New Jersey and Ohio. Internationally we lease office space in Australia, Canada, Ireland, Israel and the United Kingdom. We believe that our properties are generally suitable to meet our needs for the foreseeable future. In addition, to the extent we require additional space in the future, we believe that it would be readily available on commercially reasonable terms.

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, 2019, the last reported sales price of our common stock on the Nasdaq Global Market was \$35.28 and there were 39 stockholders of record of our common stock, including Broadridge, which holds shares of our common stock on behalf of an indeterminate number of beneficial owners.

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 (the "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, 2018. 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 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 Computer Technology 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, 2018, 2017, and 2016 and the selected consolidated balance sheet data as of December 31, 2018 and December 31, 2017 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, 2015 and 2014 and the selected consolidated balance sheet data as of December 31, 2016, 2015, and 2014 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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| | Year Ended December 31, | | | | |
|---|-------------------------|------------|------------|------------|------------|
| | 2018(1) | 2017 | 2016 | 2015 | 2014 |
| (dollars in thousands, except share and per share data) | | | | | |
| Consolidated Statements of Operations Data: | | | | | |
| Revenue: | | | | | |
| Subscription and support | \$136,578 | \$85,467 | \$65,552 | \$57,193 | \$48,625 |
| Perpetual license | 3,902 | 4,346 | 1,650 | 2,805 | 2,787 |
| Total product revenue | 140,480 | 89,813 | 67,202 | 59,998 | 51,412 |
| Professional services | 9,405 | 8,139 | 7,565 | 9,913 | 13,162 |
| Total revenue | 149,885 | 97,952 | 74,767 | 69,911 | 64,574 |
| Cost of revenue: | | | | | |
| Subscription and support | 42,881 | 28,454 | 22,734 | 19,586 | 14,042 |
| Professional services | 5,708 | 5,193 | 4,831 | 7,085 | 9,079 |
| Total cost of revenue | 48,589 | 33,647 | 27,565 | 26,671 | 23,121 |
| Gross profit | 101,296 | 64,305 | 47,202 | 43,240 | 41,453 |
| Operating expenses: | | | | | |
| Sales and marketing | 20,935 | 15,307 | 12,160 | 12,965 | 14,670 |
| Research and development | 21,320 | 15,795 | 14,919 | 15,778 | 26,165 |
| Refundable Canadian tax credits | (406) | (542) | (513) | (470) | (1,094) |
| General and administrative | 32,041 | 23,291 | 18,286 | 18,201 | 13,561 |
| Depreciation and amortization | 14,272 | 6,498 | 5,291 | 4,534 | 4,310 |
| Acquisition-related expenses | 18,728 | 15,092 | 5,583 | 2,455 | 2,186 |
| Total operating expenses | 106,890 | 75,441 | 55,726 | 53,463 | 59,798 |
| Loss from operations | (5,594) | (11,136) | (8,524) | (10,223) | (18,345) |
| Other expense: | | | | | |
| Interest expense, net | (13,273) | (6,582) | (2,781) | (1,858) | (1,951) |
| Other income (expense), net | (1,781) | 289 | (678) | (544) | 101 |
| Total other expense | (15,054) | (6,293) | (3,459) | (2,402) | (1,850) |
| Loss before provision for income taxes | (20,648) | (17,429) | (11,983) | (12,625) | (20,195) |
| Benefit from (provision for) income taxes | 9,809 | (1,296) | (1,530) | (1,039) | 78 |
| Net loss | (10,839) | (18,725) | (13,513) | (13,664) | (20,117) |
| Preferred stock dividends and accretion | — | — | — | — | (1,524) |
| Net loss attributable to common shareholders | \$(10,839) | \$(18,725) | \$(13,513) | \$(13,664) | \$(21,641) |
| Net loss per common share: | | | | | |
| Net loss per common share, basic and diluted | \$(0.54) | \$(1.02) | \$(0.82) | \$(0.91) | \$(4.43) |
| Weighted-average common shares outstanding, basic and diluted | 19,985,528 | 18,411,247 | 16,472,799 | 14,939,601 | 4,889,901 |

(1) We adopted the new revenue standard on January 1, 2018 using the modified retrospective method. Revenue for the twelve months ended December 31, 2018 increased \$0.2 million as a result of the application of the new revenue standard. In addition, sales commissions, included in 'Sales and marketing', decreased \$2.4 million due to the requirement under then new standard to capitalize costs associated with obtaining a contract. During the twelve months ended December 31, 2018, the effect on earnings per share of the adoption of ASC 606 was an increase in earnings per share of \$0.13. Refer to Note 2. Summary of Significant Accounting Policies and Note 12. Revenue Recognition to our consolidated financial statements for further discussion regarding the adoption of ASC 606.

| | Year Ended December 31, | | | | |
|--------------------------------------|-------------------------|----------|----------|----------|----------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands) | | | | |
| Consolidated Balance Sheet Data: | | | | | |
| Cash and cash equivalents | \$16,738 | \$22,326 | \$28,758 | \$18,473 | \$30,988 |
| Property and equipment, net | 2,827 | 2,927 | 4,356 | 6,001 | 3,930 |
| Intangible assets, net | 179,572 | 70,043 | 28,512 | 31,526 | 34,751 |
| Goodwill | 225,322 | 154,607 | 69,097 | 47,422 | 45,146 |
| Total assets | 483,198 | 281,259 | 150,588 | 122,414 | 135,686 |
| Deferred revenue | 58,204 | 45,377 | 23,799 | 19,939 | 21,376 |
| Total liabilities | 395,891 | 189,844 | 91,575 | 62,144 | 64,289 |
| Total stockholders' equity (deficit) | 87,307 | 91,415 | 59,013 | 60,270 | 71,397 |

| | Year Ended December 31, | | | | |
|---|----------------------------------|-----------|----------|----------|----------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands, except %) | | | | |
| Other Financial Data: | | | | | |
| Annualized recurring revenue value at year-end ⁽¹⁾ | \$131,919 | \$106,099 | \$63,968 | \$58,918 | \$56,800 |
| Annual net dollar retention rate ⁽²⁾ | 98 | % 93 | % 95 | % 90 | % 96 |
| Adjusted EBITDA ⁽³⁾ | \$53,105 | \$30,316 | \$12,616 | \$4,143 | \$4,213 |

(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, stock-based compensation expense granted to related party vendors, non-recurring litigation costs, and purchase accounting adjustments for deferred revenue.

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

| | Year Ended December 31, | | | | |
|---|-------------------------|------------|------------|------------|------------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands) | | | | |
| Net loss | \$(10,839) | \$(18,725) | \$(13,513) | \$(13,664) | \$(20,117) |
| Depreciation and amortization expense | 21,347 | 11,914 | 9,794 | 8,451 | 7,457 |
| Interest expense, net | 13,273 | 6,582 | 2,781 | 1,858 | 1,951 |
| Other expense (income), net | 1,781 | (289) | 678 | 544 | (101) |
| Provision for income taxes | (9,809) | 1,296 | 1,530 | 1,039 | (78) |
| Stock-based compensation expense | 14,130 | 9,977 | 4,333 | 2,741 | 1,077 |
| Acquisition-related expense | 18,728 | 15,092 | 5,583 | 2,455 | 2,186 |
| Stock-based compensation expense - related party vendor | — | — | — | — | 11,220 |
| Non-recurring litigation costs | — | — | 25 | 406 | 256 |
| Purchase accounting deferred revenue discount | 4,494 | 4,469 | 1,405 | 313 | 362 |
| Adjusted EBITDA | \$53,105 | \$30,316 | \$12,616 | \$4,143 | \$4,213 |

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, | | | | |
|----------------------------|-------------------------|---------|---------|---------|---------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands) | | | | |
| Stock-based compensation: | | | | | |
| Cost of revenue | \$654 | \$436 | \$44 | \$42 | \$49 |
| Research and development | 1,250 | 796 | 204 | 203 | 61 |
| Sales and marketing | 533 | 232 | 105 | 65 | 39 |
| General and administrative | 11,693 | 8,513 | 3,980 | 2,431 | 928 |
| Total | \$14,130 | \$9,977 | \$4,333 | \$2,741 | \$1,077 |

| | Year Ended December 31, | | | | |
|-------------------------------|-------------------------|---------|---------|---------|---------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands) | | | | |
| Depreciation: | | | | | |
| Cost of revenue | \$1,644 | \$1,904 | \$2,030 | \$1,800 | \$1,303 |
| Depreciation and amortization | 607 | 712 | 657 | 452 | 987 |
| Total | \$2,251 | \$2,616 | \$2,687 | \$2,252 | \$2,290 |

| | Year Ended December 31, | | | | |
|-------------------------------|-------------------------|---------|---------|---------|---------|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (dollars in thousands) | | | | |
| Amortization: | | | | | |
| Cost of revenue | \$5,431 | \$3,512 | \$2,473 | \$2,116 | \$1,844 |
| Depreciation and amortization | 13,665 | 5,786 | 4,634 | 4,083 | 3,323 |
| Total | \$19,096 | \$9,298 | \$7,107 | \$6,199 | \$5,167 |

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 software applications address enterprise work challenges in the following enterprise solution categories: Customer Experience Management. Upland Customer Experience Management, or CXM, solutions enable organizations to manage customer relationships across multiple channels - including email, SMS, MMS, web, social, and mobile apps. Upland products within this solution suite include Upland Mobile Messaging, Rant & Rave, Adestra, and RightAnswers.

Sales Enablement. Upland Sales Enablement solutions enable sales organizations to automate delivery of processes, sales activities, content, systems, and metrics at multiple stages of the sales process. Upland products within this solution suite include Qvidian, RO Innovation, and LeadLander.

Professional Services Automation. Upland Professional Services Automation, or PSA, solutions enable services organizations to manage professional services delivery and related functions. Upland products within this solution suite include Tenrox, RightAnswers, FileBound, RO Innovation, and Qvidian.

Project and Financial Management. Upland Project and Financial Management solutions enable enterprises to manage project portfolios and track, analyze and manage IT, cloud, and telecom spending. Upland products within this solution suite include PowerSteering, Eclipse PPM, RightAnswers, and ComSci.

Enterprise Knowledge Management. Upland Enterprise Knowledge Management, or KM, solutions enable knowledge-sharing across different departments within an organization. Upland products within this solution suite include RightAnswers, Tenrox, and PowerSteering.

Secure Document Services. Upland Secure Document Services solutions enable organizations to manage and automate document intensive business processes with security of data through scan and fax platforms, data monitoring and breach prevention capabilities, and the automated routing of content to its final destination. Upland products within this solution suite include AccuRoute, FileBound, and InterFAX.

Document Lifecycle Automation. Upland Document Lifecycle solutions enable users to digitize, organize, automate, integrate, analyze and optimize high volume processes. Upland products within this solution suite include AccuRoute, FileBound, Qvidian, and RO Innovation.

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 9,000 customers with over 1,000,000 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 the product solution categories listed above, each of which addresses a specific enterprise work management need. Our revenue has grown from \$22.8 million in 2012 to \$149.9 million in 2018, representing a 558% period-over-period growth rate. Historically, our revenues have been primarily generated in the United States, however, as a result of acquisitions made over the past three years of companies with more international presence, domestic revenue as a percentage of total revenue has decreased. During the year ended December 31, 2018 domestic revenue as a percent of total revenue decreased to 78% compared to 84% during the year ended December 31, 2016. We expect this trend to continue in 2019 as a result of the acquisitions of Rant & Rave and Adestra during the fourth quarter of 2018, as a majority of each company's operations reside outside the United States. See Note 12 Revenue Recognition in 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, 2018, 2017 and 2016, our subscription and support revenue accounted for 91%, 87%, and 88%, respectively of our total revenue. Historically, we have sold certain of our applications under perpetual licenses, which also are paid in advance. For the years ended December 31, 2018, 2017 and 2016, our perpetual license revenue accounted for 3%, 4%, and 2% 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, 2018, 2017 and 2016, our professional services revenue accounted for 6%, 9%, and 10%, 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 enterprise solution categories as described in Item 1. Business herein. Consistent with our growth strategy, we have made a total of sixteen acquisitions in the six years ending December 31, 2018.

2018 Acquisitions

Interfax. On March 21, 2018, the Company's wholly owned subsidiary, PowerSteering Software Limited, a limited liability company organized and existing under the laws of England and Wales ("PowerSteering UK"), completed its purchase of the shares comprising the entire issued share capital of Interfax Communications Limited ("Interfax"), an Irish-based software company providing secured cloud-based messaging solutions, including enterprise cloud fax and secure document distribution. In connection with this acquisition, the Company also acquired certain assets related to Interfax's business from a United States based reseller of Interfax's products. The purchase price consideration paid for Interfax was \$33.6 million in cash at closing, net of cash acquired of \$1.4 million, and a \$5.0 million cash holdback payable over 18 months (subject to reduction for indemnification claims). Revenues recorded since the acquisition date through December 31, 2018 were approximately \$12.1 million.

In addition, in connection with the acquisition of Interfax, certain assets and customer relationships of their U.S. reseller ("Marketech") were purchased for \$2.0 million, excluding potential future earn-out payments valued at \$0.3 million tied to additional performance-based goals.

RO Innovation. On June 28, 2018, the Company completed its purchase of RO Innovation, Inc. ("RO Innovation"), a cloud-based customer reference solution for creating, deploying, managing, and measuring customer reference and sales enablement content. The purchase price consideration paid was approximately \$12.3 million in cash payable at closing, net of cash acquired of \$0.2 million, a \$1.8 million cash holdback payable in 12 months (subject to reduction for indemnification claims) and potential future earn-out payments for up to \$7.5 million valued at \$0.0 million as of the acquisition date based on the probability of attainment of future performance-based goals. Revenues recorded since the acquisition date through December 31, 2018 were approximately \$3.0 million.

Rant & Rave. On October 3, 2018, the Company's wholly owned subsidiary, PowerSteering UK, completed its purchase of the shares comprising the entire issued share capital of Rapide Communication LTD, a private company limited by shares organized and existing under the laws of England and Wales doing business as Rant & Rave ("Rant & Rave"), a leading provider of cloud-based customer engagement solutions. The purchase price paid for Rant & Rave was \$58.5 million in cash at closing, net of cash acquired, and a \$6.5 million cash holdback payable in 12 months (subject to indemnification claims). Revenues recorded since the acquisition date through December 31, 2018 were approximately \$5.4 million.

Adestra. On December 12, 2018, the Company completed its purchase of Adestra Ltd. ("Adestra"), a leading provider of enterprise-grade email marketing, transaction and automation software. The purchase price paid was \$56.0 million in cash paid at closing, net of cash acquired, and a \$4.2 million cash holdback payable in 12 months (subject to indemnification claims). Revenues recorded since the acquisition date through December 31, 2018 were approximately \$0.6 million.

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 final payment of \$2.0 million was paid during the year ended December 31, 2018.

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, towards which \$2.2 million was paid during the year ended December 31, 2018 based on the final earn-out calculation.

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 our 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 2016 and 2017 and no further payments are expected to be made as of December 31, 2018.

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 \$4.1 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).

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, | | |
|---|-------------------------|-----------|----------|
| | 2018 | 2017 | 2016 |
| Other Financial Data: | | | |
| Annualized recurring revenue value at year-end ⁽¹⁾ | \$131,919 | \$106,099 | \$63,968 |
| Annual net dollar retention rate ⁽²⁾ | 98 | % 93 | % 95 |
| Adjusted EBITDA ⁽³⁾ | \$53,105 | \$30,316 | \$12,616 |

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.

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.

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 the Annual Report on Form 10-K for the year ended December 31, 2017, we did not include purchase accounting adjustments for deferred revenue as a component of Adjusted EBITDA, and as such, prior year Adjusted EBITDA amounts for years ended prior to December 31, 2017 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 from continuing operations, the most comparable GAAP measure, to Adjusted EBITDA for each of the periods indicated (in thousands).

| | Year Ended December 31, | | |
|---|-------------------------|------------|------------|
| | 2018 | 2017 | 2016 |
| Net loss | \$(10,839) | \$(18,725) | \$(13,513) |
| Depreciation and amortization expense | 21,347 | 11,914 | 9,794 |
| Interest expense, net | 13,273 | 6,582 | 2,781 |
| Other expense (income), net | 1,781 | (289) | 678 |
| Provision for income taxes | (9,809) | 1,296 | 1,530 |
| Stock-based compensation expense | 14,130 | 9,977 | 4,333 |
| Acquisition-related expense | 18,728 | 15,092 | 5,583 |
| Non-recurring litigation costs | — | — | 25 |
| Purchase accounting deferred revenue discount | 4,494 | 4,469 | 1,405 |
| Adjusted EBITDA | \$53,105 | \$30,316 | \$12,616 |

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 as the customer receives and consumes the benefits of the cloud services through the contract period. 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 at a point in time when the software is made available to the customer.

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 over time as services are performed. Revenues for fixed price services are generally recognized over time applying input methods to estimate progress to completion. Revenues for consumption-based services are generally recognized as the services are performed.

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 15 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, transformation 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 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 issuance costs.

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 the years ended December 31, 2018, 2017, and 2016, outside of tax deductible goodwill and current taxes in separate filing states, is related to foreign income taxes, primarily operations of our Canadian and UK subsidiaries. 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, | | | | | |
|---------------------------------|-------------------------|--------------------|-----------|--------------------|-----------|--------------------|
| | 2018 | | 2017 | | 2016 | |
| | Amount | Percent of Revenue | Amount | Percent of Revenue | Amount | Percent of Revenue |
| Revenue: | | | | | | |
| Subscription and support | \$ 136,578 | 91% | \$ 85,467 | 87% | \$ 65,552 | 88% |
| Perpetual license | 3,902 | 3% | 4,346 | 4% | 1,650 | 2% |
| Total product revenue | 140,480 | 94% | 89,813 | 91% | 67,202 | 90% |
| Professional services | 9,405 | 6% | 8,139 | 9% | 7,565 | 10% |
| Total revenue | 149,885 | 100% | 97,952 | 100% | 74,767 | 100% |
| Cost of revenue: | | | | | | |
| Subscription and support (1)(2) | 42,881 | 29% | 28,454 | 29% | 22,734 | 30% |
| Professional services | 5,708 | 3% | 5,193 | 5% | 4,831 | 7% |
| Total cost of revenue | 48,589 | 32% | 33,647 | 34% | 27,565 | 37% |
| Gross profit | 101,296 | 68% | 64,305 | 66% | 47,202 | 63% |
| Operating expenses: | | | | | | |
| Sales and marketing (1) | 20,935 | 14% | 15,307 | 16% | 12,160 | 16% |
| Research and development (1) | 21,320 | 14% | | | | |