

Confidential draft no. 3 submitted to the Securities and Exchange Commission on April 24, 2017.

This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration Statement No. 333-

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**APPIAN CORPORATION**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

7372  
(Primary Standard Industrial  
Classification Code Number)  
11955 Democracy Drive, Suite 1700  
Reston, Virginia 20190  
(703) 442-8844

54-1956084  
(I.R.S. Employer  
Identification Number)

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

**Matthew Calkins**  
Chief Executive Officer and Chairman  
Appian Corporation  
11955 Democracy Drive, Suite 1700  
Reston, Virginia 20190  
(703) 442-8844

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

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

Large Accelerated Filer

Accelerated Filer

Non-accelerated Filer

Smaller Reporting Company

Emerging Growth Company

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 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price <sup>(1)(2)</sup>	Amount of Registration Fee
Class A Common Stock, \$0.0001 par value per share	\$	\$

(1) In accordance with Rule 457(o) under the Securities Act of 1933, as amended, the number of shares being registered and the proposed maximum offering price per share are not included in this table.  
 (2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the aggregate offering price of shares that the underwriters have the option to purchase to cover over-allotments, if any.

**The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a)**

of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting others to buy these securities in any state where the offer or sale is not permitted.

**PRELIMINARY PROSPECTUS (Subject to Completion)**  
**Issued** , 2017

# Shares **Appian**

## CLASS A COMMON STOCK

Appian Corporation is offering \_\_\_\_\_ shares of its Class A common stock. This is our initial public offering and no public market currently exists for our shares of Class A Common Stock. We anticipate that the initial public offering price will be between \$ \_\_\_\_\_ and \$ \_\_\_\_\_ per share.

Following this offering, we will have two classes of authorized common stock, Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock will be identical, except with respect to voting and conversion. Each share of Class A common stock will be entitled to one vote per share. Each share of Class B common stock will be entitled to ten votes per share and will be convertible into one share of Class A common stock. Outstanding shares of Class B common stock will represent approximately \_\_\_\_\_ % of the voting power of our outstanding capital stock immediately following the closing of this offering, and outstanding shares of Class B common stock beneficially owned by our founder, Chief Executive Officer and Chairman, Matthew Calkins, will represent approximately \_\_\_\_\_ % of the voting power of our outstanding capital stock immediately following the closing of this offering.

We intend to apply to list our Class A common stock on the NASDAQ Global Market under the symbol "APPN."

We are an "emerging growth company" as defined under the U.S. federal securities laws and, as such, may elect to comply with certain reduced public company reporting requirements for this and future filings. Investing in our Class A common stock involves risks. See "Risk Factors" beginning on page 13.

### PRICE \$ A SHARE

	Price to Public	Underwriting Discounts and Commissions <sup>(1)</sup>	Proceeds to Appian
Per Share .....	\$	\$	\$
Total .....	\$	\$	\$

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

We have granted the underwriters the right to purchase up to an additional \_\_\_\_\_ shares of Class A common stock to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of Class A common stock to purchasers on \_\_\_\_\_, 2017.

**MORGAN STANLEY**      **GOLDMAN, SACHS & CO.**      **BARCLAYS**  
**PACIFIC CREST SECURITIES**      **CANACCORD GENUITY**      **COWEN AND COMPANY**  
a division of KeyBank Capital Markets

, 2017

# Appian

## The Digital Transformation Platform.™



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You should rely only on the information contained in this document and any free writing prospectus we may authorize to be delivered or made available to you. We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by us or on our behalf. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date, regardless of the time of delivery of this prospectus or any sale of shares of our Class A common stock.

**Through and including \_\_\_\_\_, 2017 (25 days after the date of this prospectus), all dealers that effect transactions in our Class A common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.**

For investors outside the United States: We and the underwriters have not done anything that would permit this offering or the possession or distribution of this prospectus in any jurisdiction where action for those purposes is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of Class A common stock and the distribution of this prospectus outside of the United States.

## PROSPECTUS SUMMARY

*This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our Class A common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes and the information set forth under the sections titled “Risk Factors,” “Special Note Regarding Forward-Looking Statements,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” in each case included elsewhere in this prospectus. Unless the context otherwise requires, we use the terms “Appian,” “company,” “our,” “us,” and “we” in this prospectus to refer to Appian Corporation and, where appropriate, our consolidated subsidiaries.*

## APPIAN CORPORATION

### Overview

Appian provides a leading low-code software development platform as a service that enables organizations to rapidly develop powerful and unique applications. The applications created on our platform help companies drive digital transformation and competitive differentiation.

With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface with little or no coding required. Our customers have used applications built on our low-code platform to launch new business lines, automate vital employee workflows, manage complex trading platforms, accelerate drug development and build global procurement systems. With our platform, decision makers can reimagine their products, services, processes and customer interactions by removing much of the complexity and many of the challenges associated with traditional approaches to software development.

Organizations across industries are digitally transforming—leveraging software to automate and optimize mission critical operations, enhance customer experiences and drive competitive differentiation. Historically, organizations have principally relied on packaged software and custom software solutions to operationalize and automate their businesses. However, these solutions are challenged in their ability to facilitate effective software-enabled digital transformation.

We enable organizations to differentiate themselves from their competition through software-enabled digital transformation. Our low-code platform employs an intuitive, visual interface and pre-built development modules that reduce the time required to build powerful and unique applications. We believe that developing applications on our platform can be as simple as drawing a picture. Our platform automates the creation of forms, data flows, records, reports and other software elements that would otherwise need to be manually coded or configured. This functionality greatly reduces the iterative development process, allowing for real-time application optimization and ultimately shortening the time from idea to deployment. Further, our patented Self-Assembling Interface Layer, or SAIL, technology ensures that applications developed on our platform can be immediately and natively deployed across a full range of mobile and desktop devices with no additional customization, including desktop web browsers, tablets and mobile phones. Updates to applications developed with SAIL disseminate automatically across device types to ensure that all users benefit from the most up-to-date functionality. At the same time, we unify enterprise data in a single searchable environment, providing organizations with a comprehensive view of customer, product, organizational asset and other critical information. Rich reporting dashboards capture detailed performance metrics, providing valuable business intelligence and analytics that enable business process optimization. Moreover, our platform can be deployed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases.

Our go-to-market strategy consists of both direct sales and, to a lesser extent, sales through strategic partners. We sell our software almost exclusively through subscriptions and intend to grow our revenue both by adding new customers and increasing the number of users at existing customers that use applications developed on our platform. In addition, we sell professional services to drive customer success by helping customers build and deploy applications on our platform.

As of December 31, 2016, we had 280 customers in a wide variety of industries, of which 225 customers were commercial and 55 customers were government or non-commercial entities. Our customers include financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation organizations. As of December 31, 2016, 32% of our commercial customers were Global 2000 organizations, and included 37 Fortune 500 companies, six of the largest 25 global financial services firms by 2016 revenue and eight of the 30 largest global healthcare companies by 2016 revenue. We determined relevant global financial services and healthcare companies by referencing certain independent industry data from S&P Global Market Intelligence. Customers receive all of the modules and functionality of our platform with their initial subscription, which facilitates the seamless creation of new applications. Many of our customers begin by building a single application and grow to build dozens of applications on our platform, which implicitly reduces the per-user cost of each application. Generally, the development of new applications results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we charge subscription fees on a per-user basis for the significant majority of our customer contracts.

We believe that we have a significant market opportunity in helping organizations accelerate their digital transformation by leveraging our low-code software development platform. Our current core software markets, which include the markets for low-code development platforms, case management software, business process management and platform-as-a-service, are expected to represent a combined \$24.0 billion market opportunity in 2017 and a combined \$40.0 billion market opportunity in the near term. In addition to our current core software markets, we believe that our platform better meets the needs that have been historically addressed by manually-developed custom enterprise software, which represented a \$149 billion market in 2016.

We have experienced strong revenue growth, with revenue of \$89.0 million, \$111.2 million and \$132.9 million in 2014, 2015 and 2016, respectively. Our subscription revenue was \$22.8 million, \$41.5 million and \$60.0 million in 2014, 2015 and 2016, respectively, representing year-over-year growth rates of 82% from 2014 to 2015 and 45% from 2015 to 2016, respectively. Our professional services revenue was \$51.9 million, \$58.0 million and \$63.0 million in 2014, 2015 and 2016, respectively. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue.

We have invested, and intend to continue to invest, in developing our platform, expanding our sales and marketing and research and development capabilities, and providing general and administrative resources to support our growth. As a result, we incurred net losses of \$17.1 million, \$7.0 million and \$12.5 million in 2014, 2015 and 2016, respectively. We also had operating cash flows of \$1.5 million, \$(2.1) million and \$(7.8) million in 2014, 2015 and 2016, respectively.

#### **Industry Background**

**Software-enabled digital transformation.** Organizations across industries are digitally transforming—leveraging software to automate and optimize mission critical operations, enhance customer experiences and drive competitive differentiation. Several key trends are fueling software-enabled digital transformation, including the rise of cloud computing and the Internet of Things and the proliferation of mobile devices.

**Challenges to effective digital transformation.** Historically, organizations have principally relied on packaged software and custom software solutions to operationalize and automate their businesses. However, these solutions are challenged in their ability to facilitate effective software-enabled digital transformation. More specifically:

- **Packaged software is inadequate.** Packaged software, whether delivered in the cloud or on-premises, is a one-size-fits-all solution that performs industry-agnostic functions or serves specific industry verticals without organization-specific differentiation. Organizations are often unable to use packaged software to address unusual use cases and differentiate themselves and must conform their individual processes, needs and systems of record to standardized frameworks and potentially adopt numerous point solutions that can be difficult to integrate.
- **Traditional custom software solutions are expensive and difficult to create.** In contrast, traditional custom solutions are built to address particular organization-specific use cases. Although this allows organizations to better manage their operations and differentiate their businesses, traditional custom software solutions have historically been hampered by several limitations:
  - Traditional application development is a long and cumbersome process, requiring complex coding and an iterative feedback cycle.
  - The proliferation in mobile devices and the competition among mobile device manufacturers means that device operating systems are continuously being updated, modified and customized for specific hardware configurations.
  - The need for organizations to manage their operations utilizing all of these devices and environments necessitates costly integrations in an attempt to avoid creating information silos.
  - Developer talent is scarce and hiring developers to create custom software is costly.

Low-code software development platforms have emerged to address the limitations associated with packaged software and traditional custom software solutions. However, many existing low-code platforms are either limited in functionality such that they do not support the development of enterprise-grade applications or continue to require significant manual coding, and therefore are not truly “low-code.”

### **Benefits of Our Platform**

We enable organizations to differentiate themselves from their competition through software-enabled digital transformation. Key benefits of our platform include:

- **Rapid and simple innovation through our powerful platform.** Our low-code platform employs an intuitive, visual interface and pre-built development modules that reduce the time required to build powerful and unique applications.
- **Powerful applications to solve complex challenges.** At the core of our platform is an advanced engine that enables the modeling, modification and management of complex processes and business rules. Organizations have used our platform to launch new business lines, build large procurement systems, manage retail store layouts, conduct predictive maintenance on field equipment and manage trading platforms, among a range of other use cases.
- **Create once, deploy everywhere.** Our patented SAIL technology allows developers to create an application once and deploy it across a full range of mobile and desktop devices with no additional customization with the consistency of experience and optimal performance levels that users expect.
- **Seamless integration with existing systems and data.** In contrast to typical enterprise software, our platform does not require that data reside within it in order to enable robust data analysis and cross-department and cross-application insight. Our platform seamlessly integrates with many of the most popular enterprise software applications and data repositories and can be used within many legacy environments.

- **Deployment flexibility to serve customer needs.** Our platform can be installed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases.
- **Industry-leading security.** Our platform is designed to meet the highest demands of our federal government and large enterprise customers. Our cloud platform holds some of the highest security certifications from government agencies and industry organizations.

Our approach to digital transformation goes beyond simply enabling organizations to build custom applications fast. We empower decision makers to reimagine their products, services, processes and customer interactions with software by removing much of the complexity and many of the challenges associated with traditional approaches to software development.

### **Our Growth Strategy**

Key elements of our growth strategy include:

- **Expand our customer base.** We believe that the market for our software development platform is in its early stages and that we have a significant opportunity to add additional large enterprise and government customers.
- **Grow through our differentiated land and expand model.** Customers receive all of the modules and functionality of our platform with their initial subscription, which facilitates the seamless creation of new applications. Generally, the development of new applications results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we usually charge subscription fees on a per-user basis.
- **Grow revenue from key industry verticals.** While our platform is industry-agnostic, we have recently made, and plan to continue to make, investments to enhance the expertise of our sales and marketing organization within our key industry verticals of financial services, healthcare and government.
- **Continue to innovate and enhance our platform.** We have made, and will continue to make, investments in research and development to strengthen our platform and expand the number of features available to our customers. As we continue to increase the functionality of our platform and further reduce the amount of developer skill that is required to build robust applications on our platform, we believe that we have the potential to expand the use of our platform.
- **Expand our international footprint.** Our platform is designed to be natively multi-lingual to facilitate collaboration and address challenges in multi-national organizations. We are investing in new geographies, including through investment in direct and indirect sales channels, professional services and customer support and implementation partners.
- **Grow our partner base.** We have several strategic partnerships, including with Deloitte, KPMG and PricewaterhouseCoopers. These partners work with organizations that are undergoing digital transformation projects and are therefore able to refer potential customers to us. We intend to further grow our base of partners to provide broader customer coverage and solution delivery capabilities.

### **Selected Risks Affecting Our Business**

Investing in our Class A common stock involves risk. You should carefully consider all the information in this prospectus prior to investing in our Class A common stock. These risks are discussed more fully in the section entitled “Risk Factors” immediately following this prospectus summary. These risks and uncertainties include, but are not limited to, the following:

- Our recent growth may not be indicative of our future growth and, if we continue to grow, we may not be able to manage our growth effectively;

- If we are unable to sustain our revenue growth rate, we may not achieve or maintain profitability in the future;
- We may not be able to scale our business quickly enough to meet our customers' growing needs, and if we are not able to grow efficiently, our operating results could be harmed;
- We are dependent on a single solution, and the lack of continued market acceptance of our platform could cause our operating results to suffer;
- We currently face significant competition;
- If our security measures are breached or unauthorized access to our platform or customer data is otherwise obtained, our platform may be perceived as not being secure, customers may reduce the use of or stop using our platform and we may incur significant liabilities;
- We have experienced losses in the past, and we may not achieve or sustain profitability in the future;
- Our future quarterly results of operations may fluctuate significantly due to a wide range of factors, which makes our future results difficult to predict;
- We derive a material portion of our revenue from a limited number of customers, and the loss of one or more of these customers could adversely impact our business, results of operations and financial condition;
- We may not be able to continue to shift our revenue towards subscriptions and away from professional services; and
- The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our stock prior to this offering, as those stockholders will hold Class B common stock after this offering, which will be entitled to ten votes per share, as opposed to the Class A common stock that we are offering, which will be entitled to one vote per share. Specifically, outstanding shares of Class B common stock will represent approximately % of the voting power of our outstanding capital stock following this offering, and outstanding shares of Class B common stock beneficially owned by our founder, Chief Executive Officer and Chairman, Matthew Calkins, will represent approximately % of the voting power of our outstanding capital stock following this offering.

### **Corporate Information**

Appian Corporation was incorporated under the laws of the State of Delaware in August 1999.

Our principal executive offices are located at 11955 Democracy Drive, Suite 1700, Reston, Virginia 20190. Our telephone number is (703) 442-8844. Our website address is [www.appian.com](http://www.appian.com). The information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our Class A common stock.

"Appian", the Appian logo, and other trademarks or service marks of Appian Corporation appearing in this prospectus are the property of Appian Corporation. This prospectus contains additional trade names, trademarks and service marks of others, which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols.

### **Implications of Being an Emerging Growth Company**

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other burdens that are otherwise applicable generally to public companies. These provisions include:

- a requirement to have only two years of audited financial statements and only two years of related selected financial data and management's discussion and analysis of financial condition and results of operations disclosure;

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- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act;
- an exemption from implementation of new or revised financial accounting standards until they would apply to private companies and from compliance with any new requirements adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotation;
- reduced disclosure obligations regarding executive compensation arrangements; and
- no requirement to seek nonbinding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of some or all these provisions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier to occur of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have total annual gross revenues of at least \$1.07 billion or (c) in which we are deemed to be a “large accelerated filer,” under the rules of the U.S. Securities and Exchange Commission, or SEC, which means the market value of our equity securities that is held by non-affiliates exceeds \$700 million as of the prior June 30th, and (2) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

We have elected to take advantage of the extended transition period to comply with new or revised accounting standards and to adopt certain of the reduced disclosure requirements available to emerging growth companies. As a result of the accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies which may make comparison of our financials to those of other public companies more difficult. In addition, the information that we provide in this prospectus may be different than the information you may receive from other public companies in which you hold equity interests. Further, it is possible that some investors will find our Class A common stock less attractive as a result of these elections, which may result in a less active trading market for our Class A common stock and higher volatility in our stock price.

**THE OFFERING**

Class A common stock offered by us	shares
Class A common stock to be outstanding after this offering	shares
Class B common stock to be outstanding after this offering	shares
Total Class A common stock and Class B common stock to be outstanding after this offering	shares
Over-allotment option of Class A common stock offered by us	shares

Voting rights

Following this offering we will have two classes of authorized common stock: Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion. The holders of Class A common stock are entitled to one vote per share, and the holders of Class B common stock are entitled to ten votes per share, on all matters that are subject to stockholder vote. The holders of Class B common stock also have approval rights for certain corporate actions. Each share of Class B common stock may be converted into one share of Class A common stock at the option of its holder and will be automatically converted into one share of Class A common stock upon transfer thereof, subject to certain exceptions. In addition, upon the date on which the outstanding shares of Class B common stock represent less than 10% of the aggregate voting power of our capital stock, all outstanding shares of Class B common stock shall convert automatically into Class A common stock. See the section of this prospectus captioned "Description of Capital Stock" for additional information.

Holders of our Class A common stock and Class B common stock will generally vote together as a single class, unless otherwise required by law or our amended and restated certificate of incorporation. Mr. Calkins, who after this offering will beneficially own approximately % of the voting power of our outstanding capital stock, will have the ability to control the outcome of matters submitted to our stockholders for approval, including the election of our directors. See "Principal Stockholders" and "Description of Capital Stock."

Use of proceeds

We estimate that we will receive net proceeds of approximately \$ million (or approximately \$ million if the underwriters exercise their over-allotment option in full), assuming an initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriter discounts and commissions and estimated offering expenses payable by us. The principal purposes of this offering are to increase our financial flexibility, create a public market for our Class A common stock, and facilitate our future access to the capital markets. We expect to use the net proceeds of this offering for working capital and other general corporate purposes. We also intend to use approximately \$ million of the net proceeds to pay all remaining outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank and approximately \$7.2 million of the net proceeds to pay a cash dividend to the holders of our Series A preferred stock that is payable upon the conversion of our Series A preferred stock to Class B common stock, which will occur immediately prior to the closing of this offering. We may use a portion of the proceeds from this offering for acquisitions or strategic investments in complementary businesses or technologies, although we do not currently have any plans for any such acquisitions or investments. These expectations are subject to change. See “Use of Proceeds” for additional information.

Risk factors

See “Risk Factors” and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our Class A common stock.

Proposed NASDAQ Global Market symbol

“APPN”

The number of shares of our Class A common stock and Class B common stock that will be outstanding after this offering is based on no shares of Class A common stock and 52,437,876 shares of Class B common stock outstanding as of December 31, 2016, and excludes:

- 6,784,448 shares of Class B common stock issuable upon the exercise of options outstanding as of December 31, 2016, at a weighted-average exercise price of \$4.65 per share;
- 84,360 shares of Class B common stock issuable upon the exercise of a warrant outstanding as of December 31, 2016, at an exercise price of \$0.88905 per share;
- 1,629,322 shares of Class B common stock reserved for future issuance under our 2007 Stock Option Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective; and

- shares of Class A common stock reserved for future issuance pursuant to our 2017 Equity Incentive Plan, which will become effective prior to the closing of this offering and will include provisions that automatically increase the number of shares of Class A common stock reserved for issuance thereunder each year.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the reclassification of our existing common stock into an equal number of shares of Class B common stock and the authorization of our Class A common stock to be effected prior to the closing of this offering;
- a one-for- stock split of our common stock to be effected prior to the closing of this offering;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 18,163,158 shares of our Class B common stock immediately prior to the closing of this offering;
- no exercise of outstanding options or warrants after December 31, 2016;
- no exercise by the underwriters of their over-allotment option to purchase additional shares of our Class A common stock; and
- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering.

## SUMMARY CONSOLIDATED FINANCIAL AND OTHER DATA

We derived the summary consolidated statements of operations data for the years ended December 31, 2014, 2015 and 2016 and the summary consolidated balance sheet data as of December 31, 2016 from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future.

When you read this summary consolidated financial data, it is important that you read it together with the historical consolidated financial statements and related notes to those statements, as well as “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included elsewhere in this prospectus.

	Year Ended December 31,		
	2014	2015	2016
(in thousands, except share and per share data)			
<b>Consolidated Statements of Operations Data:</b>			
Revenue:			
Subscriptions, software and support	\$ 37,076	\$ 53,207	\$ 69,972
Professional services	51,920	57,997	62,951
<b>Total revenue</b>	<b>88,996</b>	<b>111,204</b>	<b>132,923</b>
Cost of revenue:			
Subscriptions, software and support	4,273	6,079	7,437
Professional services	32,524	42,402	42,686
<b>Total cost of revenue</b>	<b>36,797</b>	<b>48,481</b>	<b>50,123</b>
Gross profit	52,199	62,723	82,800
Operating expenses:			
Sales and marketing	29,088	38,300	54,137
Research and development	13,488	16,750	22,994
General and administrative	23,373	12,515	17,039
<b>Total operating expenses</b>	<b>65,949</b>	<b>67,565</b>	<b>94,170</b>
Operating loss	(13,750)	(4,842)	(11,370)
Other expense:			
Other expense, net	2,086	1,579	1,792
Interest expense	19	188	982
<b>Total other expense</b>	<b>2,105</b>	<b>1,767</b>	<b>2,774</b>
Net loss before income taxes	(15,855)	(6,609)	(14,144)
Income tax expense (benefit)	1,204	378	(1,683)
Net loss	(17,059)	(6,987)	(12,461)
Accretion of dividends on convertible preferred stock	856	861	857
<b>Net loss attributable to common stockholders</b>	<b>\$ (17,915)</b>	<b>\$ (7,848)</b>	<b>\$ (13,318)</b>
Net loss per share attributable to common stockholders, basic and diluted <sup>(1)</sup>	\$ (0.50)	\$ (0.23)	\$ (0.39)
Weighted-average common shares outstanding, basic and diluted	35,717,803	34,274,718	34,274,718
Pro forma net loss per share attributable to common stockholders, basic and diluted <sup>(2)</sup>			\$
Pro forma weighted-average common shares outstanding, basic and diluted <sup>(2)</sup>			

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- (1) See note 9 to our consolidated financial statements appearing elsewhere in this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.
- (2) Pro forma basic and diluted net loss per share represents net loss divided by the pro forma weighted-average shares of common stock outstanding. Pro forma weighted-average shares outstanding reflects (a) the conversion of all outstanding shares of convertible preferred stock into an aggregate of 18,163,158 shares of Class B common stock as of January 1, 2016 or at the time of issuance, if later, (b) the reclassification of our preferred stock warrant liability to stockholders' deficit as of January 1, 2016, (c) the number of additional shares whose proceeds would be necessary to pay the cumulative dividend of \$7.2 million payable upon conversion of the Series A convertible preferred stock, which amount will be paid immediately prior to the closing of this offering, based on an assumed offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus and (d) the number of additional shares whose proceeds would be necessary to repay all outstanding principal and interest and the termination fee related to our long-term debt, based on an assumed offering price of \$ per share, the midpoint of the price range set forth on the cover of this prospectus. The amounts recorded during the year ended December 31, 2016 to reflect the accretion of dividends on convertible preferred stock and to adjust the preferred stock warrant liability to fair value, as well as interest expense recorded during the year ended December 31, 2016 related to our long-term debt, net of tax, have been added back to net loss attributable to common stockholders to arrive at pro forma net loss attributable to common stockholders.

	As of December 31, 2016		
	Actual	Pro forma <sup>(1)</sup>	Pro forma as adjusted <sup>(2)(3)</sup>
	(in thousands)		
<b>Consolidated Balance Sheet Data:</b>			
Cash and cash equivalents	\$ 31,143	\$ 31,143	\$
Working capital <sup>(4)</sup>	12,365	5,157	
Total assets	102,738	102,738	
Long-term debt, including current portion	20,000	20,000	
Deferred revenue, net of current portion	18,108	18,108	
Preferred stock warrant liability	850	—	
Total liabilities	110,815	117,173	
Convertible preferred stock	55,415	—	
Accumulated deficit	(64,825)	(69,630)	
Total stockholders' (deficit) equity	(63,492)	(14,435)	

- (1) Pro forma consolidated balance sheet data reflects (a) the reclassification of all of our outstanding shares of existing common stock and the conversion of all outstanding shares of preferred stock into Class B common stock immediately prior to the closing of this offering as if such reclassification and conversion had occurred on December 31, 2016, (b) the reclassification to stockholders' (deficit) equity of our preferred stock warrant liability in connection with the conversion of our outstanding preferred stock warrant into a Class B common stock warrant, (c) the accrual of the cumulative dividend of \$7.2 million payable concurrent with the conversion of our Series A preferred stock into Class B common stock to the holders of our Series A preferred stock, which has been calculated as if the conversion of Series A preferred stock into Class B common stock occurred as of December 31, 2016 and (d) an increase to additional paid-in capital and accumulated deficit of \$4.8 million related to cumulative stock-based compensation expense to be incurred in connection with this offering for our stock options with a liquidity event condition. Each of these actions will occur immediately prior to the completion of this offering. As the cumulative dividend represents a distribution to existing stockholders to be made from the proceeds of this offering, the pro forma consolidated balance sheet data reflects the accrual of the estimated dividend to be paid.
- (2) Pro forma as adjusted consolidated balance sheet data reflects the pro forma items described immediately above and (a) our sale of shares of Class A common stock in this offering at an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, (b) repayment of our outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank and (c) the cash payment of the cumulative dividend described in note (1) above.
- (3) Pro forma as adjusted consolidated balance sheet data is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately \$ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase or decrease in the number of shares offered by us would increase or decrease pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately \$ million, assuming that the assumed initial offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions.

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- (4) We define working capital as current assets less current liabilities. See our consolidated financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

### **Other Metrics**

In addition to our financial results, we monitor the following metrics to help us measure and evaluate the effectiveness of our operations. For a description of how we calculate these metrics, as well as their uses, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Other Metrics.”

	Year Ended December 31,		
	2014	2015	2016
Subscription Revenue	\$22,849	\$41,497	\$59,993
Subscription Revenue Retention Rate	107%	128%	112%

## RISK FACTORS

*Investing in our Class A common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before deciding whether to purchase shares of our Class A common stock. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our Class A common stock could decline, and you could lose part or all of your investment.*

### **Risks Related to Our Business and Industry**

***Our recent growth may not be indicative of our future growth and, if we continue to grow, we may not be able to manage our growth effectively.***

We have recently experienced a period of rapid growth in our headcount and operations. In particular, we grew from 173 employees as of December 31, 2011 to 720 employees as of December 31, 2016, and we have also significantly increased the size of our customer base over the last several years. We anticipate that we will continue to significantly expand our operations and headcount in the near term. Our growth has placed, and future growth will place, a significant strain on our management, administrative, operational and financial infrastructure. Our success will depend in part on our ability to manage this growth effectively. To manage the expected growth of our operations and personnel, 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 platform to customers, declines in quality or customer satisfaction, increases in costs, difficulties in introducing new features or other operational difficulties. Any of these difficulties could adversely impact our business performance and results of operations.

Our rapid growth also makes it difficult to evaluate our future prospects. Our ability to forecast our future operating results is subject to a number of uncertainties, including our ability to plan for and model future growth. If our assumptions regarding these uncertainties, which we use to plan our business, are incorrect or change in reaction to changes in our markets, or if we do not address these risks successfully, our operating and financial results could differ materially from our expectations, our business could suffer and the trading price of our stock may decline.

***If we are unable to sustain our revenue growth rate, we may not achieve or maintain profitability in the future.***

We have experienced revenue growth with revenue of \$89.0 million, \$111.2 million and \$132.9 million in 2014, 2015 and 2016, respectively. Although we have experienced rapid revenue growth historically, we may not continue to grow as rapidly in the future and our revenue growth rates may decline. Any success that we may experience in the future will depend in large part on our ability to, among other things:

- maintain and expand our customer base;
- increase revenue from existing customers through increased or broader use of our platform within their organizations;
- further penetrate the existing industry verticals that we serve and expand into other industry verticals;
- improve the performance and capabilities of our platform through research and development;
- continue to successfully expand our business domestically and internationally; and
- successfully compete with other companies.

If we are unable to maintain consistent revenue or revenue growth, our stock price could be volatile, and it may be difficult to achieve and maintain profitability. You should not rely on our revenue for any prior quarterly or annual periods as any indication of our future revenue or revenue growth.

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***We may not be able to scale our business quickly enough to meet our customers' growing needs, and if we are not able to grow efficiently, our operating results could be harmed.***

As usage of our platform grows and as customers use our platform for more advanced and more frequent projects, we may need to devote additional resources to improving our software architecture, integrating with third-party systems, and maintaining infrastructure performance. In addition, we will need to appropriately scale our internal business as well as grow our partner services systems, including our professional services organization and operations, to serve our growing customer base, particularly as our customer base expands over time. Any failure of or delay in these efforts could cause impaired system performance and reduced customer satisfaction. These issues could reduce the attractiveness of our platform to customers, resulting in decreased sales to new customers, lower renewal rates by existing customers, the issuance of service credits, or requested refunds, which could hurt our revenue growth and our reputation. Even if we are able to upgrade our systems and expand our staff, any such expansion will be expensive and complex, requiring management time and attention. We could also face inefficiencies or operational failures as a result of our efforts to scale our infrastructure. Moreover, there are inherent risks associated with upgrading, improving and expanding our information technology systems. We cannot be sure that the expansion and improvements to our infrastructure and systems will be fully or effectively implemented on a timely basis, if at all. These efforts may reduce revenue and our margins and adversely impact our financial results.

***We are dependent on a single solution, and the lack of continued market acceptance of our platform could cause our operating results to suffer.***

Sales of our Appian software platform account for substantially all of our subscription revenue and are the source of substantially all of our professional services revenue. We expect that we will be substantially dependent on our platform to generate revenue for the foreseeable future. As a result, our operating results could suffer due to:

- any decline in demand for our platform;
- the failure of our platform to achieve continued market acceptance;
- the market for low-code solutions not continuing to grow, or growing more slowly than we expect;
- the introduction of products and technologies that serve as a replacement or substitute for, or represent an improvement over, our platform;
- technological innovations or new standards that our platform does not address;
- sensitivity to current or future prices offered by us or competing solutions; and
- our inability to release enhanced versions of our platform on a timely basis.

If the market for our platform grows more slowly than anticipated or if demand for our platform does not grow as quickly as anticipated, whether as a result of competition, pricing sensitivities, product obsolescence, technological change, unfavorable economic conditions, uncertain geopolitical environment, budgetary constraints of our customers or other factors, we may not be able to grow our revenue.

***If we are unable to further penetrate our existing industry verticals or expand our customer base, our revenue may not grow and our operating results may be harmed.***

Currently, a significant majority of our revenue is derived from companies in the financial services, pharmaceuticals, insurance and healthcare industries, and from the U.S. federal government. We are investing substantial resources to expand and train our sales force to enable it to better understand these industry verticals and drive sales to customers in these industry verticals, but there can be no assurance that these investments will be successful. Further, an important part of our strategy is to expand our customer base in a wide variety of industries. We have less experience in some industries and our expansion may require us to grow our expertise in certain areas and add sales and support personnel possessing familiarity with the relevant industries. There may

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be competitors in these verticals that may be entrenched and difficult to dislodge. As a result of these and other factors, our efforts to expand our customer base may be expensive and may not succeed, and we therefore may be unable to grow our revenue. If we fail to further penetrate our existing industry verticals or expand our customer base, we may be unable to grow our revenue and our operating results may be harmed.

***Market adoption of low-code solutions to drive digital transformation is new and unproven and may not grow as we expect, which may harm our business and prospects.***

We believe our future success will depend in large part on growth in the demand for low-code solutions to drive software-enabled digital transformation. We have customers in a wide variety of industries, including financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation. It is difficult to predict customer demand for our platform, renewal rates, the rate at which existing customers expand their subscriptions, the size and growth rate of the market for our platform, the entry of competitive products or the success of existing competitive products. The utilization of low-code software to drive digital transformation is still relatively new. Any expansion in our addressable market depends on a number of factors, including businesses continuing to desire to differentiate themselves through software-enabled digital transformation, increasing their reliance on low-code solutions, changes in the competitive landscape, technological changes, budgetary constraints of our customers and changes in economic conditions. If our platform does not achieve widespread adoption or there is a reduction in demand for low-code solutions caused by a lack of customer acceptance, technological challenges, competing technologies and products, decreases in corporate or IT infrastructure spending, weakening economic conditions, or other factors, it could result in reduced customer purchases, reduced renewal rates and decreased revenue, any of which will adversely affect our business, operating results and financial condition.

***Our sales cycle is long and unpredictable, particularly with respect to large customers, and our sales efforts require considerable time and expense, all of which may cause our operating results to fluctuate.***

Our operating results may fluctuate, in part, because of the resource-intensive nature of our sales efforts, the length and variability of the sales cycle of our platform and the difficulty that we face in adjusting our short-term operating expenses. Our operating results depend in part on sales to large customers and promotion of increasing usage within those large customers. The length of our sales cycle, from initial evaluation to delivery of, and payment for, the software, varies substantially from customer to customer. Our sales cycle can extend to more than a year for certain large customers. It is difficult to predict if or when we will make a sale to a potential customer. Prospective customers, especially larger organizations, often undertake a prolonged evaluation process, which typically involves not only our platform, but also those of our competitors and can last from four to nine months or longer. We may spend substantial time, effort and money on our sales and marketing efforts without any assurance that our efforts will produce any sales. In addition, events affecting our customers' businesses may occur during the sales cycle that could affect the size or timing of a purchase, contributing to more unpredictability in our business and operating results. As a result of these factors, we may face greater costs, longer sales cycles and less predictability in the future. In the past, certain individual sales have occurred in periods later than we expected or have not occurred at all. The loss or delay of one or more large transactions in a quarter could impact our operating results for that quarter and any future quarters in which such revenue would otherwise have been recognized. As a result of these factors, it is difficult for us to forecast our revenue accurately in any quarter, and our quarterly results may fluctuate substantially. Further, because a substantial portion of our expenses are relatively fixed in the short-term, our operating results will suffer if revenue falls below our expectations in a particular quarter.

***We currently face significant competition.***

The markets for low-code development platforms, business process management, case management software and custom software are highly competitive, rapidly evolving and have relatively low barriers to entry. The principal competitive factors in our market include: platform features, reliability, performance and effectiveness; ease of use and speed; platform extensibility and ability to integrate with other technology

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infrastructures; deployment flexibility; robustness of professional services and customer support; price and total cost of ownership; strength of platform security and adherence to industry standards and certifications; strength of sales and marketing efforts; and brand awareness and reputation. If we fail to compete effectively with respect to any of these competitive factors, we may fail to attract new customers or lose or fail to renew existing customers, which would cause our operating results to suffer.

We primarily compete with low-code development platforms sold by companies such as salesforce.com, inc. and ServiceNow, Inc. We also compete with companies that provide business process management and case management software, including IBM, OpenText Corporation, Oracle Corporation, Pegasystems Inc. and SAP SE. Further, because our platform is used by our customers to create custom applications, there are software companies that offer commercial, off-the-shelf applications as well as custom software solutions that compete with us. For example, our platform is used by the Defense Information Systems Agency of the U.S. federal government, or DISA, to manage procurement processes and contract writing. Competing vendors offer software that specifically performs contract writing functionality, and we have on occasion lost competitive bids to those point solution vendors for contracts with DISA. In addition, large software and internet companies may seek to enter our primary markets.

Some of our actual and potential competitors have advantages over us, such as longer operating histories, more established relationships with current or potential customers and commercial partners, significantly greater financial, technical, marketing or other resources, stronger brand recognition, larger intellectual property portfolios and broader global distribution and presence. Such competitors may make their solutions available at a low cost or no cost basis in order to enhance their overall relationships with current or potential customers. Our competitors may also be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. With the introduction of new technologies and new market entrants, we expect competition to intensify in the future. In addition, some of our larger competitors have substantially broader offerings and can bundle competing products with other software offerings. As a result, customers may choose a bundled offering from our competitors, even if individual products have more limited functionality than our platform. These larger competitors are also often in a better position to withstand any significant reduction in capital spending, and will therefore not be as susceptible to economic downturns.

Furthermore, our actual and potential competitors may establish cooperative relationships among themselves or with third parties that may further enhance their resources and offerings in the markets we address. In addition, current or potential competitors may be acquired by third parties with greater available resources. As a result of such relationships and acquisitions, our actual or potential competitors might be able to adapt more quickly to new technologies and customer needs, devote greater resources to the promotion or sale of their products, initiate or withstand substantial price competition, take advantage of other opportunities more readily or develop and expand their offerings more quickly than we do. For all of these reasons, we may not be able to compete successfully against our current or future competitors.

***If our security measures are breached or unauthorized access to our platform or customer data is otherwise obtained, our platform may be perceived as not being secure, customers may reduce the use of or stop using our platform and we may incur significant liabilities.***

Our platform, which can be deployed in the cloud, on-premises or using a hybrid approach, allows for the storage and transmission of our customers' proprietary or confidential information, which may include trade secrets, personally identifiable information, personal health information and payment card information. Any actual or perceived unauthorized access to, or security breaches affecting, our platform or the information stored on or transmitted by our platform could result in the loss of information, litigation, regulatory investigations, penalties, indemnity obligations and other costs, expenses and liability, which could exceed our existing insurance coverage and could result in a substantial financial loss. While we have security measures in place designed to protect customer information and prevent data loss and other security breaches, there can be no assurance that these measures will be effective in protecting against unauthorized access to our platform or our

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customers' information. Similarly, if cyber incidents, such as phishing attacks, viruses, denial of service attacks, malware installation, server malfunction, software or hardware failures, loss of data or other computer assets, adware, or other similar issues, impair the integrity or availability of our systems by affecting our data, or reducing access to or shutting down one or more of our computing systems or our IT network, we may be subject to negative treatment by our customers, our business partners, the press, and the public at large. Further, 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. Additionally, we may be subject to attacks on our networks or systems or attempts to gain unauthorized access to our proprietary or confidential information or other data we or our vendors maintain, such as data about our employees. Such attacks and other breaches of security may occur as a result of malicious attacks, human error, social engineering, or other causes. Any actual or perceived breach of our security measures or failure to adequately protect our customers' or our confidential or proprietary information could negatively affect our ability to attract new customers, cause existing customers to elect to not renew their subscriptions to our software or result in reputational damage, any of which could adversely affect our operating results.

Further, security compromises experienced by our customers with respect to data hosted on our platform, even if caused by the customer's own misuse or negligence, may lead to public disclosures, which could harm our reputation, erode customer confidence in the effectiveness of our security measures, negatively impact our ability to attract new customers, or cause existing customers to elect not to renew their subscriptions with us. We may be subjected to indemnity demands, regulatory proceedings, audits, penalties or litigation based on our customers' misuse of our platform with respect to such sensitive information, and defending against such litigation and otherwise addressing such matters may be expensive, cause distraction, and may result in us incurring liability, all of which may affect our operating results.

While we maintain general liability insurance coverage and coverage for errors or omissions, we cannot assure you that such coverage will be adequate or otherwise protect us from liabilities or damages with respect to claims alleging compromises of personal data or that such coverage will continue to be available on acceptable terms or at all.

***We previously identified a material weakness in our internal control over financial reporting, and if we are unable to achieve and maintain effective internal control over financial reporting, this could have a material adverse effect on our business.***

We produce our consolidated financial statements in accordance with the requirements of U.S. GAAP. Effective internal controls are necessary for us to provide reliable financial reports to help mitigate the risk of fraud and to operate as a publicly traded company. Prior to this offering, we were a private company with limited accounting personnel and other resources with which to address our internal controls and procedures. Our independent registered public accounting firm identified a material weakness and a significant deficiency in our internal controls over financial reporting in connection with the audit of our financial statements for the year ended December 31, 2015. A "material weakness" is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. A "significant deficiency" is a deficiency or a combination of deficiencies in internal control over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of our financial reporting.

The material weakness that our independent registered public accounting firm identified related to our revenue recognition related to certain multiple element arrangements in which the controls over the review of transactions that included fixed fee professional services sold with term or perpetual license agreements failed to ensure the resulting revenue recognition was consistent with applicable guidance. This material weakness resulted in the restatement of our 2013 and 2014 financial statements, with approximately \$2.4 million in revenue

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previously recognized in 2013 being deferred until 2014 and beyond and \$1.9 million in revenue previously recognized in 2014 being deferred until 2015 and beyond. In addition, the significant deficiency involved lack of oversight to system administrative rights granted to non-IT personnel to our financial reporting systems. We have taken steps to remediate the material weakness and significant deficiency, including hiring additional accounting staff members that are proficient in revenue recognition accounting, including a manager of revenue recognition and an assistant controller, consulting with outside professional accountants on revenue recognition issues, adding internal controls related to revenue recognition and limiting administrative access rights to our financial reporting systems. We believe that as of December 31, 2016, this previous material weakness and significant deficiency were fully remediated. In connection with the audit of our 2016 financial statements, no material weaknesses were identified in our internal control over financial reporting, although one significant deficiency was identified relating to personnel access rights to key accounting spreadsheets.

As a public company, we will be required to further design, document and test our internal controls over financial reporting to comply with Sarbanes-Oxley Act Section 404. We cannot be certain that additional material weaknesses and control deficiencies will not be discovered in the future. If material weaknesses or control deficiencies occur in the future, we may be unable to report our financial results accurately on a timely basis or help prevent fraud, which could cause our reported financial results to be materially misstated and result in the loss of investor confidence or delisting and cause the market price of our Class A common stock to decline. If we have material weaknesses in the future, it could affect the financial results that we report or create a perception that those financial results do not fairly state our financial position or results of operations. Either of those events could have an adverse effect on the value of our Class A common stock.

Further, even if we conclude that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our results of operations or cause us to fail to meet our future reporting obligations.

***We derive a material portion of our revenue from a limited number of customers, and the loss of one or more of these customers could adversely impact our business, results of operations and financial condition.***

Our customer base is concentrated. For example, during the years ended December 31, 2014, 2015 and 2016, revenue from U.S. federal government agencies represented 34%, 33% and 26% of our total revenue, respectively, and the top three U.S. federal government customers generated 23%, 21% and 18% of our total revenue for the years ended December 31, 2014, 2015 and 2016, respectively. Further, nearly 10% of our subscription customers spent more than \$1 million on our software in 2016. If we were to lose one or more of our significant customers, our revenue may significantly decline. In addition, revenue from significant customers may vary from period to period depending on the timing of renewing existing agreements or entering into new agreements. The loss of one or more of our significant customers could adversely affect our business, results of operations and financial condition.

In addition, due to our dependence on a limited number of customers, we face concentration of credit risk. As of December 31, 2016, one customer accounted for 17.2% of our accounts receivable. In the case of insolvency by one of our significant customers, accounts receivable with respect to that customer might not be collectible, might not be fully collectible, or might be collectible over longer than normal terms, each of which could adversely affect our financial condition.

***A portion of our revenue is generated from subscriptions sold to governmental entities and heavily regulated organizations, which are subject to a number of challenges and risks.***

A significant portion of our revenue is generated from subscriptions sold to governmental entities, both in the United States and internationally. Additionally, many of our current and prospective customers, such as those

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in the financial services, pharmaceuticals, insurance and healthcare industries, are highly regulated and may be required to comply with more stringent regulations in connection with subscribing to and implementing our platform. Selling subscriptions to these entities can be highly competitive, expensive and time-consuming, often requiring significant upfront time and expense without any assurance that we will successfully complete a sale. Governmental demand and payment for our platform may also be impacted by public sector budgetary cycles and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our platform.

Further, governmental and highly regulated entities often require contract terms that differ from our standard arrangements, including terms that can lead to those customers obtaining broader rights in our products than would be standard. Governmental and highly regulated entities, including the General Services Administration, whose schedule accounts for many of our U.S. federal government contracts, impose compliance requirements that are complicated, require preferential pricing or “most favored nation” terms and conditions or are otherwise time-consuming and expensive to satisfy. In the United States, applicable federal contracting regulations change frequently, and the President may issue executive orders requiring federal contractors to adhere to new compliance requirements after a contract is signed. If we undertake to meet special standards or requirements and do not meet them, we could be subject to significant liability from our customers or regulators. Even if we do meet these special standards or requirements, the additional costs associated with providing our platform to government and highly regulated customers could harm our operating results. Moreover, changes in the underlying statutory and regulatory conditions that affect these types of customers could harm our ability to efficiently provide them access to our platform and to grow or maintain our customer base. In addition, engaging in sales activities to foreign governments introduces additional compliance risks specific to the Foreign Corrupt Practices Act, the U.K. Bribery Act and other similar statutory requirements prohibiting bribery and corruption in the jurisdictions in which we operate.

### ***We have experienced losses in the past, and we may not achieve or sustain profitability in the future.***

We generated net losses of \$17.1 million, \$7.0 million and \$12.5 million in 2014, 2015 and 2016, respectively. As of December 31, 2016, we had an accumulated deficit of \$64.8 million. We will need to generate and sustain increased revenue levels in future periods in order to achieve or sustain profitability in the future. We also expect our costs to increase in future periods, which could negatively affect our future operating results if our revenue does not increase commensurately. For example, we intend to continue to expend significant funds to expand our sales and marketing operations, develop and enhance our platform, meet the increased compliance requirements associated with our transition to and operation as a public company, and expand into new markets. Our efforts to grow our business may be more costly than we expect, and we may not be able to increase our revenue enough to offset our higher operating expenses. We may incur significant losses in the future for a number of reasons, including the other risks described in this prospectus, and unforeseen expenses, difficulties, complications and delays and other unknown events. If we are unable to achieve and sustain profitability, our stock price may significantly decrease.

### ***Our future quarterly results of operations may fluctuate significantly due to a wide range of factors, which makes our future results difficult to predict.***

Our revenue and results of operations have historically varied from period to period, and we expect that they will continue to do so as a result of a number of factors, many of which are outside of our control, including:

- the level of demand for our platform and our professional services;
- the rate of renewal of subscriptions with, and extent of sales of additional subscriptions to, existing customers;
- large customers failing to renew their subscriptions;
- the size, timing and terms of our subscription agreements with existing and new customers;

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- the timing and growth of our business, in particular through our hiring of new employees and international expansion;
- the timing of our adoption of new or revised accounting pronouncements applicable to public companies and the impact on our results of operations;
- the introduction of new products and product enhancements by existing competitors or new entrants into our market, and changes in pricing for solutions offered by us or our competitors;
- network outages, security breaches, technical difficulties or interruptions with our platform;
- changes in the growth rate of the markets in which we compete;
- the mix of subscriptions to our platform and professional services sold during a period;
- customers delaying purchasing decisions in anticipation of new developments or enhancements by us or our competitors or otherwise;
- changes in customers' budgets;
- seasonal variations related to sales and marketing and other activities, such as expenses related to our customers;
- our ability to increase, retain and incentivize the strategic partners that market and sell our platform;
- our ability to control costs, including our operating expenses;
- our ability to hire, train and maintain our direct sales force;
- unforeseen litigation and intellectual property infringement;
- fluctuations in our effective tax rate; and
- general economic and political conditions, both domestically and internationally, as well as economic conditions specifically affecting industries in which our customers operate.

Any one of these or other factors discussed elsewhere in this prospectus may result in fluctuations in our revenue and operating results, meaning that quarter-to-quarter comparisons of our revenue, results of operations and cash flows may not necessarily be indicative of our future performance and may cause us to miss our guidance and analyst expectations and may cause our stock price to decline.

In addition, we have historically experienced seasonality in terms of when we enter into agreements with customers. We typically enter into a significantly higher percentage of agreements with new customers, as well as renewal agreements with existing customers, in the fourth quarter and, to a lesser extent, the second quarter. The increase in customer agreements for the fourth quarter is attributable to large enterprise account buying patterns typical in the software industry. Furthermore, we usually enter into a significant portion of agreements with customers during the last month, and often the last two weeks, of each quarter. This seasonality is reflected to a much lesser extent, and sometimes is not immediately apparent, in revenue, due to the fact that we recognize subscription revenue over the term of the subscription agreement, which is generally one to five years. We expect that seasonality will continue to affect our operating results in the future and may reduce our ability to predict cash flow and optimize the timing of our operating expenses.

***We may not be able to continue to shift our revenue towards subscriptions and away from professional services.***

Currently, our revenue is nearly evenly divided between subscriptions and professional services revenue. Since 2014, the proportion of our revenue attributable to subscriptions has increased as a proportion of our total revenue. That shift in revenue towards subscriptions has resulted in an increase of our overall gross profit,

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because our marginal costs in delivering our subscriptions are lower than the marginal costs of delivering professional services. Our strategic focus has been to grow subscriptions revenue faster than professional services revenue to perpetuate this trend.

There can be no guarantee that our revenue will continue to shift towards subscriptions, and away from professional services. Our customers may demand more professional services from us, or demand for our subscriptions may grow slower than demand for our professional services. Should we fail to continue to shift our revenue towards subscriptions our earnings may suffer and our stock price may decline.

***If we do not continue to innovate and provide a platform that is useful to our customers, we may not remain competitive, and our revenue and operating results could suffer.***

Our success depends on continued innovation to provide features that make our platform useful for our customers. We must continue to invest significant resources in research and development in order to continually improve the simplicity and power of our platform. We may introduce significant changes to our platform or develop and introduce new and unproven products, including using technologies with which we have little or no prior development or operating experience. If we are unable to continue offering innovative solutions or if new or enhanced solutions fail to engage our customers, we may be unable to attract additional customers or retain our current customers, which may adversely affect our business, operating results and financial condition.

***We may need to reduce or change our pricing model to remain competitive.***

We generally sell our software on a per-user basis. We expect that we may need to change our pricing from time to time. As competitors introduce new products that compete with ours or reduce their prices, we may be unable to attract new customers or retain existing customers based on our historical pricing. We also must determine the appropriate price to enable us to compete effectively internationally. Moreover, mid- to large-size enterprises may demand substantial price discounts as part of the negotiation of sales contracts. As a result, we may be required or choose to reduce our prices or change our pricing model, which could adversely affect our business, operating results and financial condition.

***Defects or disruptions in the rollout of our platform updates or enhancements could diminish demand for our platform, adversely affect our reputation and subject us to substantial liability.***

Like many software companies, we provide frequent incremental releases of software updates and functional enhancements to our platform. Despite extensive pre-release testing, such new versions occasionally contain undetected errors when first introduced or released. We have, from time to time, found errors in our software, and new errors in our existing software may be detected in the future. Since our customers use our software for important aspects of their business, any errors, defects, disruptions in our platform or other performance problems with our solution could hurt our reputation and may damage our customers' businesses. If that occurs, our customers may delay or withhold payment to us, elect not to renew, make service credit claims, warranty claims or other claims against us, and we could lose future sales. The occurrence of any of these events could result in an increase in our bad debt expense, an increase in collection cycles for accounts receivable, decreased future revenue and earnings, require us to increase our warranty provisions or incur the risk or expense of litigation.

***If the estimates and assumptions we have used to calculate the size of our target market are inaccurate, our future growth rate may be limited.***

We have estimated the size and potential growth of our target market based on data published by third parties and on internally generated data and assumptions. We have not independently verified any third-party information and cannot assure you of its accuracy or completeness. While we believe our market size and growth information is generally reliable, such information is inherently imprecise. In addition, our projections,

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assumptions and estimates of future opportunities within our target market are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in this prospectus. If third-party or internally generated data prove to be inaccurate or we make errors in our assumptions based on that data, our future growth rate may be limited. In addition, these inaccuracies or errors may cause us to misallocate capital and other business resources, which could harm our business.

Even if our target market meets our size estimates and experiences the forecasted growth, we may not grow our business at similar rates, or at all. Our growth is subject to many factors, including our success in implementing our business strategy, which is subject to many risks and uncertainties. Accordingly, the forecasts of market growth included in this prospectus should not be taken as indicative of our future growth.

***If governments or their agencies reduce their demand for our platform, our business may suffer. Moreover, if we fail to comply with government contracting regulations, we could suffer a loss of revenue or incur price adjustments or other penalties.***

Changes in governmental budget priorities could adversely affect our business. U.S. and foreign government agencies have purchased our platform directly from us and products from our customers. When the government changes budget priorities, such as in times of war or financial crisis or as a result of election cycles and our subscription sales to government entities and government-funded customers are at risk. Demand and payment for our subscriptions and our customers' products may be affected by public sector budgetary cycles or funding authorizations. Funding reductions or delays could negatively impact demand for our platform. If government funding is discontinued or significantly reduced, our business could be materially adversely affected. For example, one of our largest customers is a government agency responsible for implementing a portion of the ACA. If funding for ACA implementation is curtailed or terminated, the agency may not renew its annual subscription with us, which could adversely affect our operating results.

Some of our revenue is derived from contracts with agencies of the U.S. government and subcontracts with its prime contractors. As a result, we are subject to federal contracting regulations, including the Federal Acquisition Regulation, or the FAR, system. The FAR system governs, among other things, U.S. government contract pricing, including determination of the costs incurred by us in the performance of our U.S. government contracts. Under the FAR system, certain contract pricing is based on estimated direct and indirect costs, which are subject to change. Additionally, under the FAR system, the U.S. government is entitled, for years after final payment on certain negotiated contracts, to examine all of our cost records with respect to such contracts and to seek a downward adjustment to the price of the contract if it determines that we failed to furnish complete, accurate and current cost or pricing data in connection with the negotiation of the price of the contract.

In connection with our U.S. government contracts, we are also subject to government audits and review and approval of our policies, procedures and internal controls for compliance with contract terms, procurement regulations and applicable laws. In certain circumstances, if we do not comply with the terms of a contract or with regulations or statutes, we could be subject to contract termination or downward contract price adjustments or refund obligations, could be assessed civil or criminal penalties or could be debarred or suspended from obtaining future contracts for a specified period of time. Any such termination, adjustment, sanction, debarment or suspension could have an adverse effect on our business.

***Our business could be adversely affected if our customers are not satisfied with the deployment services provided by us or our partners.***

The success of our business depends on our customers' satisfaction with our platform, the support that we provide for our platform and the professional services that we provide to help our customers deploy our platform. Professional services may be performed by our own staff, by a third party or by a combination of the two. Our strategy is to work with third parties to increase the breadth, capability and depth of capacity for delivery of these services to our customers, and third parties provide a significant portion of our deployment services. If a

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customer is not satisfied with the quality of work performed by us or a third party or with the type of applications delivered, we could incur additional costs to address the deficiency, which would diminish the profitability of the customer relationship. Further, a customer's dissatisfaction with our services could impair our ability to expand the number of licenses to our software purchased by that customer or adversely affect the customer's renewal of existing licenses. In addition, negative publicity related to our customer relationships, regardless of accuracy, may further damage our business by affecting our ability to compete for new business with actual and prospective customers.

***If customers do not expand their use of our platform beyond initial use cases and applications, our ability to grow our business and our operating results may be adversely affected.***

Our ability to grow our business depends, in part, on our ability to persuade existing customers to expand their use of our platform to additional use cases and additional applications, and to purchase additional software licenses to our platform. Our goal is for customer satisfaction with initial applications developed on our platform to drive increased sales of licenses to our platform. However, if customers are not satisfied with their initial experience using our platform, they may choose not to renew licenses upon expiration or purchase additional software licenses, which would adversely affect our operating results.

***We are substantially dependent upon customer renewals, the addition of new customers and the continued growth of our subscription revenue.***

We derive, and expect to increasingly derive in the future, a substantial portion of our revenue from the sale of software subscriptions. For 2014, 2015 and 2016, approximately 42%, 48% and 53%, respectively, of our total revenue was subscriptions, software and support revenue. The market for our platform is still evolving, and competitive dynamics may cause pricing levels to change as the market matures and as existing and new market participants introduce new types of solutions and different approaches to enable customers to address their needs. As a result, we may be forced to reduce the prices we charge for software and may be required to offer terms less favorable to us for new and renewing agreements.

In order for us to improve our operating results, it is important that our customers renew their subscriptions with us when their initial term expires, as well as purchase additional subscriptions from us. In general, our customers have no renewal obligation after their initial term expires, and we cannot assure you that we will be able to renew subscriptions with any of our customers at the same or higher contract value.

Further, while we offer access to our platform primarily through multi-year subscription agreements, some agreements may have shorter durations. Additionally, some of our contracts limit the amount we can increase prices from period to period, or include pricing guarantees. If our customers do not renew their agreements, terminate their agreements, renew their agreements on terms less favorable to us or fail to purchase additional software subscriptions, our revenue may decline and our operating results would likely be harmed as a result.

***We rely on the performance of highly skilled personnel, including senior management and our engineering, professional services, sales and technology professionals; if we are unable to retain or motivate key personnel or hire, retain and motivate qualified personnel, our business would be harmed.***

We believe our success has depended, and continues to depend, on the efforts and talents of our senior management team, particularly Matthew Calkins, our founder and Chief Executive Officer, and our highly skilled team members, including our sales personnel, professional services personnel and software engineers. We do not maintain key man insurance on any of our executive officers or key employees other than Mr. Calkins. From time to time, there may be changes in our senior management team resulting from the termination or departure of our executive officers and key employees. Our senior management and key employees are employed on an at-will basis, which means that they could terminate their employment with us at any time. The loss of any of our senior management or key employees, particularly Mr. Calkins, could adversely affect our ability to build on the efforts they have undertaken and to execute our business plan, and we may not

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be able to find adequate replacements. We cannot ensure that we will be able to retain the services of any members of our senior management or other key employees.

Our ability to successfully pursue our growth strategy also depends on our ability to attract, motivate and retain our personnel. Competition for well-qualified employees in all aspects of our business, including sales personnel, professional services personnel and software engineers, is intense. Our recruiting efforts focus on elite universities and our primary recruiting competition are well-known, high-paying firms. Our continued ability to compete effectively depends on our ability to attract new employees and to retain and motivate existing employees. If we do not succeed in attracting well-qualified employees or retaining and motivating existing employees, our business would be adversely affected.

***Failure to effectively develop and expand our sales and marketing capabilities could harm our ability to increase our customer base and achieve broader market acceptance of our solution.***

Our ability to increase our customer base and achieve broader market acceptance of our platform will depend to a significant extent on our ability to expand our sales and marketing operations. We plan to continue expanding our sales force and third-party strategic sales partners, both domestically and internationally; however, there is no assurance that we will be successful in attracting and retaining talented sales personnel or strategic partners or that any new sales personnel or strategic partners will be able to achieve productivity in a reasonable period of time or at all. We also plan to dedicate significant resources to sales and marketing programs, including through electronic marketing campaigns and trade event sponsorship and participation. All of these efforts will require us to invest significant financial and other resources and our business will be harmed if our efforts do not generate a correspondingly significant increase in revenue.

***If we are not able to maintain and enhance our brand, our business and operating results may be adversely affected.***

We believe that developing and maintaining widespread awareness of our brand in a cost-effective manner is critical to achieving widespread acceptance of our platform and attracting new customers. Brand promotion activities may not generate customer awareness or increase revenue, and even if they do, any increase in revenue may not offset the expenses we incur in building our brand. If we fail to successfully promote and maintain our brand, or incur substantial expenses, we may fail to attract or retain customers necessary to realize a sufficient return on our brand-building efforts, or to achieve the widespread brand awareness that is critical for broad customer adoption of our platform.

***Our services revenue is highly dependent on selling software to new and existing customers.***

We derive a majority of our services revenue from professional services that relate to the development and delivery of new applications using our platform, after a customer has made an initial or additional software purchase. Accordingly, our failure to sell software may have a collateral adverse impact on our services revenue and our overall operational results.

***Because we generally recognize revenue from subscriptions ratably over the term of a license agreement, near term changes in sales may not be reflected immediately in our operating results.***

We offer our solution primarily through multi-year subscription agreements and generally recognize revenue ratably over the related license period. As a result, much of the revenue that we report in each quarter is derived from the recognition of previously unbilled contract value relating to agreements entered into during prior periods. In addition, because we invoice the majority of customers for not more than the next fiscal year, including customers with multi-year agreements, we do not record deferred revenue beyond amounts invoiced as a liability on our balance sheet. Accordingly, a decline in new or renewal subscription agreements in any quarter is not likely to be reflected immediately in our revenue results for that quarter. Such declines, however, would

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negatively affect our revenue and to a lesser extent deferred revenue balance in future periods, and the effect of significant downturns in sales and market acceptance of our platform, and potential changes in our rate of renewals, may not be fully reflected in our results of operations until future periods. Our subscription model also makes it difficult for us to rapidly increase our total revenue and deferred revenue balance through additional sales in any period, as revenue from new customers must be recognized over the applicable subscription term.

***We rely upon Amazon Web Services to operate our cloud offering; any disruption of or interference with our use of Amazon Web Services would adversely affect our business, results of operations and financial condition.***

We outsource substantially all of the infrastructure relating to our cloud offering to Amazon Web Services, or AWS, which hosts our platform on our customers' behalf. Customers of our cloud offering need to be able to access our platform at any time, without interruption or degradation of performance, and we provide them with service level commitments with respect to uptime. AWS runs its own platform that we access, and we are, therefore, vulnerable to service interruptions at AWS. We may experience interruptions, delays and outages in service and availability from time to time as a result of problems with our AWS provided infrastructure. For example, in September 2015, AWS suffered a significant outage that had a widespread impact on cloud-based software and services companies. Although our customers were not affected by that outage, a similar outage could render our cloud offering inaccessible to customers. Additionally, AWS has suffered outages at specific customer locations in the past, rendering the customer unable to access our offering for periods of time. Lack of availability of our AWS infrastructure could be due to a number of potential causes including technical failures, natural disasters, fraud or security attacks that we cannot predict or prevent. Such outages could lead to the triggering of our service level agreements and the issuance of credits to our cloud offering customers, which may impact our operating results.

In addition, if the security of the AWS infrastructure is compromised or believed to have been compromised, our business, results of operations and financial condition could be adversely affected. It is possible that our customers and potential customers would hold us accountable for any breach of security affecting the AWS infrastructure and we may incur significant liability from those customers and from third parties with respect to any breach affecting AWS systems. Because our agreement with AWS limits AWS's liability for damages, we may not be able to recover a material portion of our liabilities to our customers and third parties from AWS. Customers and potential customers may refuse to do business with us because of the perceived or actual failure of our cloud offering as hosted by AWS and our operating results could be harmed.

Our agreement with AWS allows AWS to terminate the agreement by providing one year's prior written notice, and may allow AWS to terminate in case of a breach of contract if such breach is uncured for 30 days, or to terminate immediately if AWS's further provision of services to us becomes impractical for legal or regulatory reasons. Although we expect that we could receive similar services from other third parties, if any of our arrangements with AWS are terminated, we could experience interruptions on our platform and in our ability to make our platform available to customers, as well as delays and additional expenses in arranging alternative cloud infrastructure services.

***If our platform fails to perform properly, our reputation could be adversely affected, our market share could decline and we could be subject to liability claims.***

Our platform is inherently complex and may contain material defects or errors. Any defects in functionality or that cause interruptions in the availability of our platform could result in:

- loss or delayed market acceptance and sales;
- breach of warranty claims;
- sales credits or refunds for prepaid amounts related to unused subscription services;
- loss of customers;

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- diversion of development and support resources; and/or
- injury to our reputation.

The costs incurred in correcting any material defects or errors might be substantial and could adversely affect our operating results.

Our customer agreements often provide service level commitments on a monthly basis. If we are unable to meet the stated service level commitments or suffer extended periods of unavailability for our platform, we may be contractually obligated to provide these customers with service credits, refunds for prepaid amounts or we could face contract terminations. Our revenue could be significantly affected if we suffer unscheduled downtime that exceeds the allowed downtimes under our agreements with our customers.

Because of the large amount of data that we collect and manage, it is possible that hardware failures or errors in our systems could result in data loss or corruption, or cause the information that we collect to be incomplete or contain inaccuracies that our customers regard as significant. Furthermore, the availability or performance of our platform could be adversely affected by a number of factors, including customers' inability to access the internet, the failure of our network or software systems, security breaches or variability in user traffic for our services. For example, our cloud offering customers access our platform through their internet service providers. If a customer's service provider fails to provide sufficient capacity to support our platform or otherwise experiences service outages, such failure could interrupt our customers' access to our platform, adversely affect their perception of our platform's reliability and reduce our revenue. In addition to potential liability, if we experience interruptions in the availability of our cloud offering, our reputation could be adversely affected and we could lose customers.

### ***If we fail to offer high-quality support, our business and reputation would suffer.***

Our customers rely on our personnel for support of our platform. High-quality support is important for the renewal of our agreements with existing customers and to our existing customers purchasing additional software. The importance of high-quality support will increase as we expand our business and pursue new customers. If we do not help our customers quickly resolve issues and provide effective ongoing support, our ability to sell new software to existing and new customers would suffer and our reputation with existing or potential customers would be harmed.

### ***Our strategy of offering and deploying our platform in the cloud, on-premises or using a hybrid approach causes us to incur increased expenses and may pose challenges to our business.***

We offer and sell our platform in the cloud, on-premises or using a hybrid approach using the customer's own infrastructure. Our cloud offering enables our customers to eliminate the burden of provisioning and maintaining infrastructure and to scale their usage of our software platform quickly, while our on-premises offering allows for the customer's complete control over data security and software infrastructure. Historically, our platform was developed in the context of the on-premises offering, and we have less operating experience offering and selling subscriptions to our platform via our cloud offering. Although a substantial majority of our revenue has historically been generated from customers using our platform on an on-premises basis, our customers are increasingly adopting our cloud offering. We expect that our customers will continue to move to our cloud offering and that it will become more central to our distribution model. To support both on-premises and cloud instances of our platform, our support team must be trained on and learn multiple environments in which our software is deployed, which is more expensive than supporting only a cloud offering. Moreover, we must engineer our software for both an on-premises and cloud offering installation, which may cause us additional research and development expense that may impact our operating results. As more of our customers transition to the cloud, we may be subject to additional competitive pressures, which may harm our business. We are directing a significant portion of our financial and operating resources to implement a robust and secure cloud

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offering for our platform, but even if we continue to make these investments, we may be unsuccessful in growing or implementing our cloud offering in a way that competes successfully against our current and future competitors and our business, results of operations and financial condition could be harmed.

***As a result of our customers' increased usage of our cloud offering, we will need to continually improve our computer network and infrastructure to avoid service interruptions or slower system performance.***

As usage of our cloud offering grows and as customers use it for more complicated applications and with increased data requirements, we will need to devote additional resources to improving our platform architecture and our infrastructure in order to maintain the performance of our cloud offering. Any failure or delays in our computer systems could cause service interruptions or slower system performance. If sustained or repeated, these performance issues could reduce the attractiveness of our platform to customers. These performance issues could result in lost customer opportunities and lower renewal rates, any of which could hurt our revenue growth, customer loyalty and reputation.

***If we cannot maintain our corporate culture as we grow, we could lose the innovation, teamwork, passion and focus on execution that we believe contribute to our success, and our business may be harmed.***

We believe that a critical component to our success has been our corporate culture. We have invested substantial time and resources in building our team and maintaining that corporate culture through the growth of our company. As we grow and develop the infrastructure of a public company, we may find it difficult to maintain important aspects of our corporate culture. Any failure to preserve our culture could negatively affect our future success, including our ability to retain and recruit personnel and to effectively focus on and pursue our corporate objectives.

***Because our long-term growth strategy involves further expansion of our sales to customers outside the United States, our business will be susceptible to risks associated with international operations.***

A component of our growth strategy involves the further expansion of our operations and customer base internationally. In 2014, 2015 and 2016, revenue generated from customers outside the United States was 26%, 20% and 20%, respectively, of our total revenue. We currently have international offices in the United Kingdom, continental Europe and Australia, which focus primarily on selling and implementing our platform in those regions. In the future, we may expand to other international locations. Our current international operations and future initiatives will involve a variety of risks, including:

- changes in a specific country's or region's political or economic conditions;
- unexpected changes in regulatory requirements, taxes or trade laws;
- more stringent regulations relating to data security and the unauthorized use of, or access to, commercial and personal information, particularly in the European Union;
- differing labor regulations, especially in the European Union, where labor laws are generally more advantageous to employees as compared to the United States, including deemed hourly wage and overtime regulations in these locations;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits and compliance programs;
- difficulties in managing a business in new markets with diverse cultures, languages, customs, legal systems, alternative dispute systems and regulatory systems;
- increased travel, real estate, infrastructure and legal compliance costs associated with international operations;
- currency exchange rate fluctuations and the resulting effect on our revenue and expenses, and the cost and risk of entering into hedging transactions if we choose to do so in the future;

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- limitations on our ability to reinvest earnings from operations in one country to fund the capital needs of our operations in other countries;
- laws and business practices favoring local competitors or general preferences for local vendors;
- limited or insufficient intellectual property protection;
- political instability or terrorist activities;
- exposure to liabilities under anti-corruption and anti-money laundering laws, including the U.S. Foreign Corrupt Practices Act and similar laws and regulations in other jurisdictions; and
- adverse tax burdens and foreign exchange controls that could make it difficult to repatriate earnings and cash.

Our limited experience in operating our business internationally increases the risk that any potential future expansion efforts that we may undertake will not be successful. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business and operating results will suffer.

### ***Our growth depends in part on the success of our strategic relationships with third parties.***

In order to grow our business, we anticipate that we will continue to depend on relationships with strategic partners to provide broader customer coverage and solution delivery capabilities. Identifying partners, and negotiating and documenting relationships with them, requires significant time and resources. Our agreements with our strategic partners are non-exclusive and do not prohibit them from working with our competitors or offering competing solutions. Our competitors may be effective in providing incentives to third parties to favor their products or services or to prevent or reduce subscriptions to our services. If our partners choose to place greater emphasis on products of their own or those offered by our competitors or do not effectively market and sell our platform, our ability to grow our business and sell software and professional services may be adversely affected. In addition, acquisitions of our partners by our competitors could result in a decrease in the number of our current and potential customers, as our partners may no longer facilitate the adoption of our platform by potential customers.

If we are unsuccessful in establishing or maintaining our relationships with third parties, our ability to compete in the marketplace or to grow our revenue could be impaired and our operating results may suffer. Even if we are successful, we cannot assure you that these relationships will result in increased customer usage of our platform or increased revenue.

### ***If currency exchange rates fluctuate substantially in the future, our financial results, which are reported in U.S. dollars, could be adversely affected.***

Generally, contracts executed by our foreign operations are denominated in the currency of that country or region and a portion of our revenue is therefore subject to foreign currency risks. As we continue to expand our international operations, we become more exposed to the effects of fluctuations in currency exchange rates. A strengthening of the U.S. dollar could increase the real cost of our platform to our customers outside of the United States, adversely affecting our business operations and financial results. We incur expenses for employee compensation and other operating expenses at our non-U.S. locations in the local currency, and fluctuations in the exchange rates between the U.S. dollar and other currencies could result in the dollar equivalent of such expenses being higher. This could have a negative impact on our reported operating results. To date, we have not engaged in any hedging strategies, and any such strategies, such as forward contracts, options and foreign exchange swaps related to transaction exposures that we may implement to mitigate this risk may not eliminate our exposure to foreign exchange fluctuations.

***Future acquisitions could disrupt our business and adversely affect our business operations and financial results.***

Although we have not done so in the past, we may choose to expand by acquiring businesses or technologies. Our ability as an organization to successfully acquire and integrate technologies or businesses is unproven. Acquisitions involve many risks, including the following:

- an acquisition may negatively affect our financial results because it may require us to incur charges or assume substantial debt or other liabilities, may cause adverse tax consequences or unfavorable accounting treatment, may expose us to claims and disputes by third parties, including intellectual property claims and disputes, or may not generate sufficient financial return to offset additional costs and expenses related to the acquisition;
- we may encounter difficulties or unforeseen expenditures in integrating the business, technologies, products, personnel or operations of any company that we acquire, particularly if key personnel of the acquired company decide not to work for us;
- an acquisition may disrupt our ongoing business, divert resources, increase our expenses and distract our management;
- an acquisition may result in a delay or reduction of customer purchases for both us and the company acquired due to customer uncertainty about continuity and effectiveness of service from either company;
- we may encounter difficulties in, or may be unable to, successfully sell any acquired solutions;
- an acquisition may involve the entry into geographic or business markets in which we have little or no prior experience or where competitors have stronger market positions;
- our use of cash to pay for an acquisition would limit other potential uses for our cash; and
- if we incur debt to fund such acquisition, such debt may subject us to material restrictions on our ability to conduct our business as well as financial maintenance covenants.

The occurrence of any of these risks could have a material adverse effect on our business operations and financial results. In addition, we may only be able to conduct limited due diligence on an acquired company's operations. Following an acquisition, we may be subject to unforeseen liabilities arising from an acquired company's past or present operations and these liabilities may be greater than the warranty and indemnity limitations that we negotiate. Any unforeseen liability that is greater than these warranty and indemnity limitations could have a negative impact on our financial condition.

***We may require additional capital to support business growth, and this capital might not be available on acceptable terms, if at all.***

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new features or enhance our platform, improve our operating infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our Class A common stock. Any debt financing that we may secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be adversely affected.

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***We employ third-party licensed software for use in or with our software, and the inability to maintain these licenses or errors in the software we license could result in increased costs, or reduced service levels, which would adversely affect our business.***

Our software incorporates certain third-party software obtained under licenses from other companies, including database software from Kx Systems, Inc. We anticipate that we will continue to rely on such third-party software and development tools from third parties in the future. Although we believe that there are commercially reasonable alternatives to the third-party software we currently license, including open source software, this may not always be the case, or it may be difficult or costly to migrate to other third-party software. Our use of additional or alternative third-party software would require us to enter into license agreements with third parties. In addition, integration of the third-party software used in our software with new third-party software may require significant work and require substantial investment of our time and resources. Also, any undetected errors or defects in third-party software could prevent the deployment or impair the functionality of our software, delay new updates or enhancements to our platform, result in a failure of our platform and injure our reputation.

***If we do not or cannot maintain the compatibility of our platform with third-party applications that our customers use in their businesses, our revenue will decline.***

The functionality and attractiveness of our platform depends, in part, on our ability to integrate our platform with third-party applications and platforms, including customer relationship management, human resources information, accounting and enterprise resource planning systems that our customers use and from which they obtain data. Third-party providers of applications and APIs may change the features of their applications and platforms, restrict our access to their applications and platforms or alter the terms governing use of their applications and APIs and access to those applications and platforms in an adverse manner. Such changes could functionally limit or terminate our ability to use these third-party applications and platforms in conjunction with our platform, which could negatively impact our offerings and harm our business. If we fail to integrate our software with new third-party applications and platforms that our customers use, we may not be able to offer the functionality that our customers need, which would negatively impact our ability to generate revenue and adversely impact our business.

***Portions of our platform utilize open source software, and any failure to comply with the terms of one or more of these open source licenses could negatively affect our business.***

Our software contains software licensed to us by third parties under so-called “open source” licenses, including the GNU Lesser General Public License, the BSD License, the Apache License and others. From time to time, there have been claims against companies that distribute or use open source software in their products and services, asserting that such open source software infringes the claimants’ intellectual property rights. We could be subject to suits by parties claiming that what we believe to be licensed open source software infringes their intellectual property rights. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. In addition, certain open source licenses require that source code for software programs that are subject to the license be made available to the public and that any modifications or derivative works to such open source software continue to be licensed under the same terms.

Although we monitor our use of open source software in an effort both to comply with the terms of the applicable open source licenses and to avoid subjecting our software to conditions we do not intend, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our platform. By the terms of certain open source licenses, we could be required to release the source code of our software and to make our software available under open source licenses, if we combine or distribute our software

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with open source software in a certain manner. In the event that portions of our software are determined to be subject to an open source license, we could be required to publicly release the affected portions of our source code, re-engineer all, or a portion of, that software or otherwise be limited in the licensing of our software, each of which could reduce or eliminate the value of our platform. Many of the risks associated with usage of open source software cannot be eliminated, and could negatively affect our business, results of operations and financial condition.

### ***Catastrophic events may disrupt our business.***

Our corporate headquarters are located in Reston, Virginia. The area around Washington, D.C. could be subjected to terrorist attacks. Additionally, we rely on our network and third-party infrastructure and enterprise applications, internal technology systems and our website for our development, marketing, operational support, hosted services and sales activities. In the event of a major hurricane, earthquake or catastrophic event such as fire, power loss, telecommunications failure, cyberattack, war or terrorist attack, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our software development, lengthy interruptions in our services, breaches of data security and loss of critical data, all of which could have an adverse effect on our future operating results.

### ***Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.***

Generally accepted accounting principles in the United States, or U.S. GAAP, are subject to interpretation by the Financial Accounting Standards Board, or FASB, the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of a change.

In particular, in May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes the revenue recognition requirements in ASC 605, Revenue Recognition. The core principle of ASU 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. As an “emerging growth company” the JOBS Act allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. We have elected to use this extended transition period under the JOBS Act with respect to ASU 2014-09, which will result in ASU 2014-09 becoming applicable to us on January 1, 2019.

We are evaluating ASU 2014-09 and have not determined the impact it may have on our financial reporting. If, for example, we were required to recognize revenue differently with respect to our term license subscriptions and our cloud-based licenses, the differential revenue recognition may cause variability in our reported operating results due to periodic or long-term changes in the mix between term license subscriptions and cloud subscriptions to our platform.

### ***If our estimates or judgments relating to our critical accounting policies prove to be incorrect, our results of operations could be adversely affected.***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The results of these estimates form the basis for making judgments about the carrying values of assets, liabilities and equity, and the amount of revenue and expenses that

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are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to revenue recognition, income taxes and the related valuation allowance, stock-based compensation and fair value measurements for our outstanding warrants. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our Class A common stock.

### ***Adverse economic conditions may negatively impact our business.***

Our business depends on the overall demand for enterprise software and on the economic health of our current and prospective customers. The financial recession that began in 2008 resulted in a significant weakening of the economy in the United States and Europe and of the global economy, more limited availability of credit, a reduction in business confidence and activity, and other difficulties that may affect one or more of the industries to which we sell our platform. In addition, the economies of countries in Europe have been experiencing weakness associated with high sovereign debt levels, weakness in the banking sector and uncertainty over the future of the Euro zone. We have operations in the United Kingdom and in Europe and current and potential new customers in Europe. If economic conditions in Europe and other key markets for our platform continue to remain uncertain or deteriorate further, many customers may delay or reduce their information technology spending. This could result in reductions in sales of our platform, decrease in our renewal rate, longer sales cycles, reductions in subscription duration and value, slower adoption of new technologies and increased price competition. Any of these events would likely have an adverse effect on our business, operating results and financial position.

### **Risks Related to Government Regulation, Data Collection, Intellectual Property and Litigation**

#### ***Failure to comply with governmental laws and regulations could harm our business.***

Our business is subject to regulation by various federal, state, local and foreign governments. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, injunctions or other collateral consequences. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations, and financial condition could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees. Enforcement actions and sanctions could harm our business, reputation, results of operations and financial condition.

#### ***Because our software could be used to collect and store personal information, domestic and international privacy concerns could result in additional costs and liabilities to us or inhibit sales of our software.***

Personal privacy has become a significant issue in the United States and in many other countries where we offer our software for sale. The regulatory framework for privacy issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. Many federal, state and foreign government bodies and agencies have adopted or are considering adopting laws and regulations regarding the collection, use, storage and disclosure of personal information and breach notification procedures. Interpretation of these laws, rules and regulations and their application to our software and professional services in the United States and foreign jurisdictions is ongoing and cannot be fully determined at this time.

In the United States, these include rules and regulations promulgated under the authority of the Federal Trade Commission, the Electronic Communications Privacy Act, Computer Fraud and Abuse Act, the Health Insurance Portability and Accountability Act of 1996, the Gramm Leach Bliley Act and state laws relating to privacy and data security. Internationally, virtually every jurisdiction in which we operate has established its own

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data security and privacy legal framework with which we or our customers must comply. Since we are agnostic as to the data uploaded into our cloud offering by our cloud offering customers or processed by our platform in on-premises deployments, we may be hosting or otherwise processing substantial amounts of individually identifiable health information and other types of personally identifiable information.

In addition to government regulation, privacy advocates and industry groups may propose new and different self-regulatory standards that may apply to us. Because the interpretation and application of privacy and data protection laws are still uncertain, it is possible that these laws and other actual or alleged legal obligations, such as contractual or self-regulatory obligations, may be interpreted and applied in a manner that is inconsistent with our existing data management practices or the features of our platform. If so, in addition to the possibility of fines, lawsuits and other claims, we could be required to fundamentally change our business activities and practices or modify our software, which could have an adverse effect on our business. Any inability to adequately address privacy concerns, even if unfounded, or comply with applicable privacy or data protection laws, regulations and policies, could result in additional cost and liability to us, damage our reputation, inhibit sales and adversely affect our business.

Furthermore, the costs of compliance with, and other burdens imposed by, the laws, regulations, and policies that are applicable to the businesses of our customers may limit the use and adoption of, and reduce the overall demand for, our platform. Privacy concerns, whether valid or not valid, may inhibit market adoption of our platform particularly in certain industries and foreign countries.

### ***Any failure to protect our proprietary technology and intellectual property rights could substantially harm our business and operating results.***

Our success and ability to compete depend in part on our ability to protect our proprietary technology and intellectual property. To safeguard these rights, we rely on a combination of patent, trademark, copyright and trade secret laws and contractual protections in the United States and other jurisdictions, all of which provide only limited protection and may not now or in the future provide us with a competitive advantage.

As of December 31, 2016, we had one issued patent relating to our SAIL technology and two patent applications pending in the United States relating to our platform. We cannot assure you that any patents will issue from any patent applications, that patents that issue from such applications will give us the protection that we seek or that any such patents will not be challenged, invalidated or circumvented. Any patents that may issue in the future from our pending or future patent applications may not provide sufficiently broad protection and may not be enforceable in actions against alleged infringers. Obtaining and enforcing software patents in the United States is becoming increasingly challenging. Any patents we have obtained or may obtain in the future may be found to be invalid or unenforceable in light of recent and future changes in the law. We have registered the “Appian” name and logo in the United States and certain other countries. We have registrations and/or pending applications for additional marks in the United States; however, we cannot assure you that any future trademark registrations will be issued for pending or future applications or that any registered trademarks will be enforceable or provide adequate protection of our proprietary rights. We also license software from third parties for integration into our software, including open source software and other software available on commercially reasonable terms. We cannot assure you that such third parties will maintain such software or continue to make it available.

In order to protect our unpatented proprietary technologies and processes, we rely on trade secret laws and confidentiality and invention assignment agreements with our employees, consultants, strategic partners, vendors and others. Some of our customer contracts also require us to place our proprietary source code in escrow for the benefit of our customer in the event we go bankrupt, become insolvent or are unable to fulfill our support obligations under our customer contracts. Also, despite our efforts to protect our proprietary technology and trade secrets, unauthorized parties may attempt to misappropriate, copy, reverse engineer or otherwise obtain and use them. In addition, others may independently discover our trade secrets, in which case we would not be able to

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assert trade secret rights, or develop similar technologies and processes. Further, the contractual provisions that we enter into may not prevent unauthorized use or disclosure of our proprietary technology or intellectual property rights and may not provide an adequate remedy in the event of unauthorized use or disclosure of our proprietary technology or intellectual property rights. Moreover, policing unauthorized use of our technologies, trade secrets and intellectual property is difficult, expensive and time-consuming, particularly in foreign countries where the laws may not be as protective of intellectual property rights as those in the United States and where mechanisms for enforcement of intellectual property rights may be weak. To the extent that we expand our activities outside of the United States, our exposure to unauthorized copying and use of our platform and proprietary information may increase. We may be unable to determine the extent of any unauthorized use or infringement of our platform, technologies or intellectual property rights.

There can be no assurance that the steps that we take will be adequate to protect our proprietary technology and intellectual property, that others will not develop or patent similar or superior technologies, products or services, or that our trademarks, patents, and other intellectual property will not be challenged, invalidated or circumvented by others. Furthermore, effective trademark, patent, copyright, and trade secret protection may not be available in every country in which our software is available or where we have employees or independent contractors. In addition, the legal standards relating to the validity, enforceability, and scope of protection of intellectual property rights in internet and software-related industries are uncertain and still evolving.

In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. Litigation brought to protect and enforce our intellectual property rights could be costly, time-consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. 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. Our failure to secure, protect and enforce our intellectual property rights could seriously adversely affect our brand and adversely impact our business.

***We may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages and could limit our ability to use certain technologies.***

Companies in the software and technology industries, including some of our current and potential competitors, own significant numbers of patents, copyrights, trademarks and trade secrets and frequently enter into litigation based on allegations of infringement or other violations of intellectual property rights. In addition, many of these companies have the capability to dedicate substantially greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. The litigation may involve patent holding companies or other adverse patent owners that have no relevant product revenue and against which our patents may therefore provide little or no deterrence. In the past, we have been subject to allegations of patent infringement that were unsuccessful, and we may in the future be subject to claims that we have misappropriated, misused, or infringed other parties' intellectual property rights, and, to the extent we gain greater market visibility or face increasing competition, we face a higher risk of being the subject of intellectual property infringement claims, which is not uncommon with respect to enterprise software companies. We also generally grant our customers ownership of any custom applications that we develop for them, subject to our continued ownership of our pre-existing intellectual property rights, and in the past, a customer for whom we have developed custom applications has incorrectly alleged that applications we have independently developed infringed the customer's intellectual property rights. In addition, we have in the past and may in the future be subject to claims that employees or contractors, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of our competitors or other parties. To the extent that intellectual property claims are made against our customers based on their usage of our technology, we have certain obligations to indemnify and defend such customers from those claims. The term of our contractual indemnity provisions often survives termination or expiration of the applicable agreement. Large indemnity payments, defense costs or damage claims from contractual breach could harm our business, results of operations and financial condition.

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There may be third-party intellectual property rights, including issued or pending patents that cover significant aspects of our technologies or business methods. Any intellectual property claims, with or without merit, could be very time-consuming, could be expensive to settle or litigate, could divert our management's attention and other resources and could result in adverse publicity. These claims could also subject us to making substantial payments for legal fees, settlement payments, and other costs or damages, potentially including treble damages if we are found to have willfully infringed patents or copyrights. These claims could also result in our having to stop making, selling, offering for sale, or using technology found to be in violation of a third party's rights. We might be required to seek a license for the third-party intellectual property rights, which may not be available on reasonable terms or at all. Even if a license is available to us, we may be required to pay significant upfront fees, milestones or royalties, which would increase our operating expenses. Moreover, to the extent we only have a license to any intellectual property used in our platform, there may be no guarantee of continued access to such intellectual property, including on reasonable terms. As a result, we may be required to develop alternative non-infringing technology, which could require significant effort and expense. If a third party is able to obtain an injunction preventing us from accessing such third-party intellectual property rights, or if we cannot license or develop technology for any infringing aspect of our business, we would be forced to limit or stop sales of our software or cease business activities covered by such intellectual property, and may be unable to compete effectively. Any of these results would adversely affect our business, results of operations, financial condition and cash flows.

***Changes in laws and regulations related to the internet or changes in the internet infrastructure itself may diminish the demand for our platform, and could have a negative impact on our business.***

The future success of our business, and particularly our cloud offering, depends upon the continued use of the internet as a primary medium for commerce, communication and business applications. Federal, state or foreign government bodies or agencies have in the past adopted, and may in the future adopt, laws or regulations affecting the use of the internet as a commercial medium. Changes in these laws or regulations could require us to modify our platform in order to comply with these changes. In addition, government agencies or private organizations may begin to impose taxes, fees or other charges for accessing the internet or commerce conducted via the internet. These laws or charges could limit the growth of internet-related commerce or communications generally, resulting in reductions in the demand for internet-based solutions such as ours.

In addition, the use of the internet as a business tool could be adversely affected due to delays in the development or adoption of new standards and protocols to handle increased demands of internet activity, security, reliability, cost, ease of use, accessibility, and quality of service. The performance of the internet and its acceptance as a business tool have been adversely affected by "viruses," "worms" and similar malicious programs and the internet has experienced a variety of outages and other delays as a result of damage to portions of its infrastructure. If the use of the internet is adversely affected by these issues, demand for our platform could suffer.

***Forecasting our estimated annual effective tax rate for financial accounting purposes is complex and subject to uncertainty, and there may be material differences between our forecasted and actual tax rates.***

Forecasts of our income tax position and effective tax rate for financial accounting purposes are complex and subject to uncertainty because our income tax position for each year combines the effects of a mix of profits earned and losses incurred by us in various tax jurisdictions with a broad range of income tax rates, as well as changes in the valuation of deferred tax assets and liabilities, the impact of various accounting rules and changes to these rules and tax laws, the results of examinations by various tax authorities, and the impact of any acquisition, business combination or other reorganization or financing transaction. To forecast our global tax rate, we estimate our pre-tax profits and losses by jurisdiction and forecast our tax expense by jurisdiction. If the mix of profits and losses, our ability to use tax credits, or effective tax rates by jurisdiction is different than those estimated, our actual tax rate could be materially different than forecasted, which could have a material impact on our results of business, financial condition and results of operations.

***Our operating results may be negatively affected if we are required to pay additional state sales tax, value added, or other transaction taxes, and we could be subject to liability with respect to all or a portion of past or future sales.***

We currently collect and remit sales and use, value added and other transaction taxes in certain of the jurisdictions where we do business based on our assessment of the amount of taxes owed by us in such jurisdictions. However, in some jurisdictions in which we do business, we do not believe that we owe such taxes, and therefore we currently do not collect and remit such taxes in those jurisdictions or record contingent tax liabilities in respect of those jurisdictions.

Further, due to uncertainty in the application and interpretation of applicable tax laws in various jurisdictions, we may be exposed to sales and use, value added or other transaction tax liability. A successful assertion that we are required to pay additional taxes in connection with sales of our platform, or the imposition of new laws or regulations requiring the payment of additional taxes, would create increased costs and administrative burdens for us. If we are subject to additional taxes and determine to offset such increased costs by collecting and remitting sales taxes from our customers, or otherwise passing those costs through to our customers, companies may be discouraged from using our platform. Any increased tax burden may decrease our ability or willingness to compete in relatively burdensome tax jurisdictions, result in substantial tax liabilities related to past sales or otherwise harm our business and operating results.

***We are a multinational organization faced with increasingly complex tax issues in many jurisdictions, and we could be obligated to pay additional taxes in various jurisdictions.***

As a multinational organization, we may be subject to taxation in several jurisdictions around the world with increasingly complex tax laws, the amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax principles, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents, which could have a material adverse effect on our liquidity and operating results. In addition, the authorities in these jurisdictions could review our tax returns and impose additional tax, interest and penalties, and the authorities could claim that various withholding requirements apply to us or our subsidiaries or assert that benefits of tax treaties are not available to us or our subsidiaries, any of which could have a material impact on us and the results of our operations.

***Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.***

As of December 31, 2016, we had federal and state net operating loss carryforwards, or NOLs, at Appian Corporation of \$1.8 million and \$1.7 million, respectively, available to offset future taxable income, which substantially expire in 2036 if not utilized. A lack of future taxable income would adversely affect our ability to utilize these NOLs before they expire. Under the provisions of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, substantial changes in our ownership may limit the amount of pre-change NOLs that can be utilized annually in the future to offset taxable income. Section 382 of the Internal Revenue Code, or Section 382, imposes limitations on a company's ability to use NOLs if a company experiences a more-than-50-percent ownership change over a three-year testing period. Based upon our analysis as of December 31, 2016, we have determined that we do not expect these limitations to impair our ability to use our NOLs prior to expiration. However, if changes in our ownership occur in the future, our ability to use our NOLs may be further limited. For these reasons, we may not be able to utilize a material portion of the NOLs, even if we achieve profitability.

As of December 31, 2016, we also had federal NOLs at Appian Software Switzerland of \$23.7 million, which expire in 2021 through 2023, if unused. If we are limited in our ability to use our NOLs in future years in which we have taxable income, we will pay more taxes than if we were able to fully utilize our NOLs. This could adversely affect our operating results and the market price of our Class A common stock.

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***We are subject to anti-corruption laws with respect to our domestic and international operations and non-compliance with such laws can subject us to criminal and/or civil liability and materially harm our business.***

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the United Kingdom Bribery Act 2010, and other anti-corruption laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit our company from authorizing, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We use third-party law firms, accountants, and other representatives for regulatory compliance, sales, and other purposes in several countries. We can be held liable for the corrupt or other illegal activities of these third-party representatives, our employees, contractors, and other agents, even if we do not explicitly authorize such activities. In addition, although we have implemented policies and procedures to ensure compliance with anti-corruption laws, there can be no assurance that all of our employees, representatives, contractors, or agents will comply with these laws at all times. Noncompliance with these laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations and financial condition could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees. Enforcement actions and sanctions could further harm our business, results of operations, and financial condition. Moreover, as an issuer of securities, we also are subject to the accounting and internal controls provisions of the FCPA. These provisions require us to maintain accurate books and records and a system of internal controls sufficient to detect and prevent corrupt conduct. Failure to abide by these provisions may have an adverse effect on our business, operations or financial condition.

***We are subject to governmental export and import controls and economic and trade sanctions that could impair our ability to conduct business in international markets and subject us to liability if we are not in compliance with applicable laws and regulations.***

The United States and other countries maintain and administer export and import laws and regulations, including various economic and trade sanctions including those administered by the Office of Foreign Assets Control, or OFAC, which apply to our business. We are required to comply with these laws and regulations. If we fail to comply with such 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.

Changes in our platform, or changes in applicable export or import laws and regulations may create delays in the introduction and sale of our platform in international markets or, in some cases, prevent the export or import of our platform to certain countries, governments or persons altogether. Any change in export or import laws and regulations or economic or trade sanctions, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons or technologies targeted by such laws and regulations could also result in decreased use of our platform, or in our decreased ability to export or sell our platform to existing or potential customers. Any decreased use of our services or limitation on our ability to export or sell our services would likely adversely affect our business, financial condition, and results of operations.

We incorporate encryption technology into certain of our products. Encryption products may be exported outside of the United States only with the required export authorization, including by license, license exception or other appropriate government authorization. Obtaining the necessary export license or other authorization for a

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particular sale may be time-consuming and may result in the delay or loss of sales opportunities. In addition, various countries regulate the import of certain encryption technology, including import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products or could limit our customers' ability to implement our products in those countries. Although we take precautions to prevent our products from being provided in violation of such laws, our products may have been in the past, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. Governmental regulation of encryption technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, could harm our international sales and adversely affect our revenues.

Moreover, U.S. export control laws and economic sanctions programs prohibit the provision of 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 platform from being used by U.S. sanctions targets, our platform could be used by a sanctioned person or in an embargoed country despite such precautions. Any such shipment could have negative consequences, including government investigations, penalties and reputational harm.

***Our business could be adversely affected if our employees cannot obtain and maintain required security clearances or we cannot maintain our facility security clearance.***

If and when awarded, certain U.S. government contracts require our employees to maintain various levels of security clearances, and we would be required to maintain our facility security clearance, to comply with Department of Defense, or DoD, requirements. The DoD has strict security clearance requirements for personnel who work on classified programs. Obtaining and maintaining security clearances for employees involves a lengthy process, and it is difficult to identify, recruit and retain employees who already hold security clearances. If our employees are unable to obtain security clearances in a timely manner, or at all, or if our employees who hold security clearances are unable to maintain their clearances or terminate employment with us, then a customer requiring classified work could terminate an existing contract or decide not to renew the contract upon its expiration. To the extent we are not able to maintain our facility security clearance, we may not be able to bid on or win new classified contracts.

### **Risk Related to Our Class A Common Stock and This Offering**

***Our stock price may be volatile, and you may lose some or all of your investment.***

The initial public offering price for the shares of our Class A common stock will be determined by negotiations between us and the representatives of the underwriters and may not be indicative of the market price of our Class A common stock following this offering. The market price of our Class A common stock may be highly volatile and may fluctuate substantially as a result of a variety of factors, some of which are related in complex ways, including:

- actual or anticipated fluctuations in our financial condition and operating results;
- variance in our financial performance from expectations of securities analysts;
- changes in the prices of subscriptions to our platform;
- changes in our projected operating and financial results;
- changes in laws or regulations applicable to our platform;
- announcements by us or our competitors of significant business developments, acquisitions or new offerings;
- our involvement in any litigation;
- our sale of our Class A common stock or other securities in the future;
- changes in senior management or key personnel;

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- the trading volume of our Class A common stock;
- changes in the anticipated future size and growth rate of our market; and
- general economic, regulatory and market conditions.

Recently, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry fluctuations, as well as general economic, political, regulatory and market conditions, may negatively impact the market price of our Class A common stock. If the market price of our Class A common stock after this offering does not exceed the initial public offering price, you may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future, which could result in substantial costs and divert our management's attention.

***No public market for our Class A common stock currently exists, and an active public trading market may not develop or be sustained following this offering.***

No public market for our Class A common stock currently exists. An active public trading market for our Class A common stock may not develop following the completion of this offering or, if developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

***Future sales of our Class A common stock in the public market could cause the market price of our Class A common stock to decline.***

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

All of our executive officers, senior management, directors and substantially all of the holders of our capital stock are subject to lock-up agreements that restrict their ability to transfer shares of our capital stock for 180 days from the date of this prospectus. These lock-up agreements limit the number of shares of capital stock that may be sold immediately following this offering. Subject to certain limitations, approximately \_\_\_\_\_ shares of Class A common stock issuable upon conversion of outstanding Class B common stock will become eligible for sale upon expiration of the 180-day lock-up period. Morgan Stanley & Co. LLC and Goldman, Sachs & Co. may, in their sole discretion, permit our stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

In addition, as of December 31, 2016, there were \_\_\_\_\_ shares of Class B common stock subject to outstanding options. We intend to register all of the shares of Class A common stock issuable upon conversion of the shares of Class B common stock issuable upon exercise of outstanding options, and upon exercise of settlement of any options or other equity incentives we may grant in the future, for public resale under the Securities Act of 1933, as amended, or the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance as permitted by any applicable vesting requirements, subject to the lock-up agreements described above. The shares of Class A common stock issuable upon conversion of these shares will become eligible for sale in the public market to the extent such options are exercised, subject to the lock-up agreements described above and compliance with applicable securities laws.

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Holders of \_\_\_\_\_ shares of Class B common stock, including \_\_\_\_\_ shares issuable upon conversion of outstanding preferred stock as of December 31, 2016, have rights, subject to some conditions, to require us to file registration statements for the public resale of the Class A common stock issuable upon conversion of such shares or to include such shares in registration statements that we may file for ourselves or other stockholders.

***The dual class structure of our common stock and the existing ownership of capital stock by Matthew Calkins, our founder and Chief Executive Officer, has the effect of concentrating voting control with Mr. Calkins for the foreseeable future, which will limit your ability to influence corporate matters.***

Our Class B common stock has ten votes per share, and our Class A common stock, which is the stock we are offering in this offering, has one vote per share. Given the greater number of votes per share attributed to our Class B common stock, our existing stockholders, all of which hold shares of Class B common stock, will collectively beneficially own shares representing approximately \_\_\_\_\_ % of the voting power of our outstanding capital stock following the completion of this offering. Further, Mr. Calkins, our founder and Chief Executive Officer, together with his affiliates, will collectively beneficially own shares representing approximately \_\_\_\_\_ % of the voting power of our outstanding capital stock following the completion of this offering. Consequently, Mr. Calkins, together with his affiliates, will continue to be able to control a majority of the voting power even if their stock holdings represent as few as approximately \_\_\_\_\_ % of the outstanding number of shares of our common stock. This concentrated control will limit your ability to influence corporate matters for the foreseeable future. For example, Mr. Calkins will be able to control elections of directors, amendments of our certificate of incorporation or bylaws, increases to the number of shares available for issuance under our equity incentive plans or adoption of new equity incentive plans and approval of any merger or sale of assets for the foreseeable future. This concentrated control could also discourage a potential investor from acquiring our Class A common stock due to the limited voting power of such stock relative to the Class B common stock and might harm the market price of our Class A common stock. In addition, Mr. Calkins has the ability to control the management and major strategic investments of our company as a result of his position as our Chief Executive Officer and his ability to control the election or replacement of our directors. As a board member and officer, Mr. Calkins owes a fiduciary duty to our stockholders and must act in good faith in a manner he reasonably believes to be in the best interests of our stockholders. However, as a stockholder, even a controlling stockholder, Mr. Calkins is entitled to vote his shares, and shares over which he has voting control, in his own interests, which may not always be in the interests of our stockholders generally.

Future transfers by Mr. Calkins and other holders of Class B common stock will generally result in those shares converting on a 1:1 basis to Class A common stock, which will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long-term.

***We have not elected to take advantage of the “controlled company” exemption to the corporate governance rules for publicly-listed companies but may do so in the future.***

Because our CEO, Mr. Calkins, owns in excess of 50% of the voting power of our outstanding capital stock, we are eligible to elect the “controlled company” exemption to the corporate governance rules for publicly-listed companies. We have not elected to do so. If we decide to become a “controlled company” under the corporate governance rules for publicly-listed companies, we would not be required to have a majority of our board of directors be independent, nor would we be required to have a compensation committee or an independent nominating function. If we chose controlled company status in the future, our status as a controlled company could cause our Class A common stock to be less attractive to certain investors or otherwise harm our trading price.

***If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our stock price and trading volume could decline.***

The trading market for our Class A common stock will depend, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If our financial performance fails to meet analyst estimates or one or more of the analysts who cover us

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downgrade our shares or change their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

***We do not intend to pay dividends for the foreseeable future and, as a result, your ability to achieve a return on your investment will depend on appreciation in the price of Class A our common stock.***

We have never declared or paid any cash dividends on our capital stock and, following this offering, we do not intend to pay any cash dividends in the foreseeable future. Although we will pay a cash dividend of \$7.2 million in connection with the conversion of our existing Series A preferred stock to Class B common stock immediately prior to the closing of this offering, which was agreed to at the time of the original issuance of the Series A preferred stock, we anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

***We may invest or spend the proceeds of this offering in ways with which you may not agree or in ways which may not yield a return.***

We anticipate that the net proceeds from this offering will be used for working capital and other general corporate purposes. We also intend to use the proceeds of this offering to pay all remaining outstanding principal and interest, together with a termination fee, under our term loan facility with Silicon Valley Bank and to pay a cash dividend to the holders of our Series A preferred stock that is payable upon the conversion of our Series A preferred stock to Class B common stock, which will occur immediately prior to the closing of this offering. We may also use a portion of the net proceeds to acquire complementary businesses, products or technologies. However, we do not have any agreements or commitments for any acquisitions at this time. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used effectively. The net proceeds may be invested with a view towards long-term benefits for our stockholders and this may not increase our operating results or market value. The failure by our management to apply these funds effectively may adversely affect the return on your investment.

***You will experience immediate and substantial dilution in the net tangible book value of the shares of Class A common stock you purchase in this offering.***

The initial public offering price of our Class A common stock will be substantially higher than the pro forma net tangible book value per share of our common stock immediately after this offering. If you purchase shares of our Class A common stock in this offering, you will suffer immediate dilution of \$     per share, or \$     per share if the underwriters exercise their over-allotment option in full, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to the sale of Class A common stock in this offering and the assumed public offering price of \$     per share, the midpoint of the price range set forth on the cover page of this prospectus. See “Dilution.” If outstanding options or warrants to purchase our common stock are exercised in the future, you will experience additional dilution.

***We are an “emerging growth company” and we cannot be certain if the reduced reporting and disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors.***

We are an “emerging growth company,” as defined in the JOBS Act, and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, the auditor attestation requirements of 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 of holding a nonbinding advisory vote on

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executive compensation and stockholder approval of any golden parachute payments not previously approved. We cannot predict if investors will find our Class A common stock less attractive if we choose to rely on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

As an “emerging growth company” the JOBS Act allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. We have elected to use this extended transition period under the JOBS Act. As a result, our consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our Class A common stock less attractive to investors.

***We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to compliance with our public company responsibilities and corporate governance practices.***

As a public company, and particularly after we are no longer an “emerging growth company,” we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the NASDAQ Stock Market and other applicable securities rules and regulations impose various requirements on public companies. Our management and other personnel will need to devote a substantial amount of time to compliance with these requirements. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain directors’ and officers’ liability insurance, which could make it more difficult for us to attract and retain qualified members of our board of directors. We cannot predict or estimate the amount of additional costs we will incur as a public company or the timing of such costs.

***As a result of becoming a public company, we will be obligated to develop and maintain proper and effective internal controls over financial reporting and any failure to maintain the adequacy of these internal controls may adversely affect investor confidence in our company and, as a result, the value of our Class A common stock.***

We will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting for the year ending December 31, 2018. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. Our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting until our 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. We will be required to disclose significant changes made in our internal control procedures on a quarterly basis.

We have commenced the costly and challenging process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404, and we may not be able to complete our evaluation, testing and any required remediation in a timely fashion. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge and compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404.

During the evaluation and testing process of our internal controls, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective. We cannot assure you that there will not be material weaknesses or

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significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition or results of operations. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our Class A common stock could decline, and we could be subject to sanctions or investigations by the NASDAQ Stock Market, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

***Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our Class A common stock.***

In addition to the effects of our dual class structure, provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as will be in effect upon the completion of this offering, may have the effect of delaying or preventing a change in control or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws will include provisions that may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any “interested” stockholder for a period of three years following the date on which the stockholder became an “interested” stockholder. Any of the foregoing provisions could limit the price that investors might be willing to pay in the future for shares of our Class A common stock, and they could deter potential acquirers of our company, thereby reducing the likelihood that you would receive a premium for your shares of our Class A common stock in an acquisition.

***Our amended and restated certificate of incorporation will designate the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us and limit the market price of our Class A common stock.***

Pursuant to our amended and restated certificate of incorporation, as will be in effect upon the completion of this offering, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws or (4) any action asserting a claim governed by the internal affairs doctrine. Our amended and restated certificate of incorporation will further provide that any person or entity purchasing or otherwise acquiring any interest in shares of our Class A common stock is deemed to have notice of and consented to the foregoing provision. The forum selection clause in our amended and restated certificate of incorporation may limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us and limit the market price of our Class A common stock.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections of this prospectus entitled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “objective,” “ongoing,” “plan,” “predict,” “project,” “potential,” “should,” “will,” or “would,” or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. The forward-looking statements and opinions contained in this prospectus are based upon information available to us as of the date of this prospectus and, while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. Forward-looking statements include statements about:

- our market opportunity and the expansion of our core software markets in general;
- the effects of increased competition as well as innovations by new and existing competitors in our market;
- our ability to adapt to technological change and effectively enhance, innovate and scale our platform and professional services;
- our ability to effectively manage or sustain our growth and to achieve profitability;
- potential acquisitions and integration of complementary businesses and technologies;
- our expected use of proceeds;
- our ability to maintain, or strengthen awareness of, our brand;
- perceived or actual problems with the integrity, reliability, quality or compatibility of our platform, including unscheduled downtime or outages;
- future revenue, hiring plans, expenses, capital expenditures, capital requirements and stock performance;
- our ability to attract and retain qualified employees and key personnel and further expand our overall headcount;
- our ability to stay abreast of new or modified laws and regulations that currently apply or become applicable to our business both in the United States and internationally;
- our ability to maintain, protect and enhance our intellectual property;
- costs associated with defending intellectual property infringement and other claims; and
- the future trading prices of our Class A common stock and the impact of securities analysts’ reports on these prices.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus.

You should refer to the “Risk Factors” section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking

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statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, or the Securities Act, do not protect any forward-looking statements that we make in connection with this offering.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

## INDUSTRY AND MARKET DATA

Information contained in this prospectus concerning our industry and the market in which we operate, including our general expectations and market position, market opportunity and market size is based on information from various sources, including independent industry publications by Forrester Research Inc., or Forrester, Aite Group, LLC, or Aite, International Data Corporation, or IDC, Gartner, Inc., or Gartner, and S&P Global. In presenting this information, we have also made assumptions based on such data and other similar sources, and on our knowledge of, and in our experience to date in, the markets for our services. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Although neither we nor the underwriters have independently verified the accuracy or completeness of any third-party information, we believe the market position, market opportunity and market size information included in this prospectus is reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the “Risk Factors” section. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

The Forrester studies described herein, one of which was commissioned by us, represent data, research, opinions or viewpoints prepared by Forrester and are not representations of fact. We have been advised by Forrester that its studies speak as of their original date (and not as of the date of this prospectus) and any opinions expressed in the studies are subject to change without notice.

The Gartner report described in this prospectus represents data, research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner and are not representations of fact. The Gartner report speaks as of its original publication date, and not as of the date of this prospectus, and the opinions expressed in the Gartner report are subject to change without notice. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner’s research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

The S&P Global Market Intelligence data described herein represents proprietary data gathered by S&P Global Market Intelligence and is not a representation of fact. The S&P Global Market Intelligence data is as of February 2, 2017 (and not as of the date of this prospectus) and is subject to change without notice.

## USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of \_\_\_\_\_ shares of our Class A common stock in this offering will be approximately \$ \_\_\_\_\_ million, or approximately \$ \_\_\_\_\_ million if the underwriters exercise their over-allotment option in full, based upon an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase or decrease in the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by approximately \$ \_\_\_\_\_ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase or decrease in the number of shares offered by us would increase or decrease the net proceeds to us from this offering by approximately \$ \_\_\_\_\_ million, assuming that the assumed initial offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions. We do not expect that a change in the initial price to the public or the number of shares by these amounts would have a material effect on the uses of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

The principal purposes of this offering are to increase our financial flexibility, create a public market for our Class A common stock and facilitate our future access to the capital markets. Although we have not yet determined with certainty the manner in which we will allocate the net proceeds of this offering, we expect to use the net proceeds from this offering for working capital and other general corporate purposes. We also intend to use approximately \$ \_\_\_\_\_ million of the net proceeds to pay all remaining outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank and approximately \$7.2 million of the net proceeds to pay a cash dividend to the holders of our Series A preferred stock that is payable upon the conversion of our Series A preferred stock to Class B common stock, which will occur immediately prior to the closing of this offering.

We may also use a portion of the proceeds from this offering for acquisitions or strategic investments in complementary businesses or technologies, although we do not currently have any plans for any such acquisitions or investments. We have not allocated specific amounts of net proceeds for any of these purposes.

The expected use of net proceeds from this offering represents our intentions based upon our present plans and business conditions. We cannot predict with certainty all of the particular uses for the proceeds of this offering or the amounts that we will actually spend on the uses set forth above. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending their use, we intend to invest the net proceeds of this offering in a variety of capital-preservation investments, including short- and intermediate-term, interest-bearing, investment-grade securities and government securities.

## **DIVIDEND POLICY**

We have never declared or paid any dividends on our common stock. Although we will pay a cash dividend of \$7.2 million in connection with the conversion of our existing Series A preferred stock to Class B common stock immediately prior to the closing of this offering, which was agreed to at the time of the original issuance of the Series A preferred stock, we currently intend to retain all available funds and any future earnings for the operation and expansion of our business. Accordingly, following this offering, we do not anticipate declaring or paying cash dividends in the foreseeable future. The payment of any future dividends will be at the discretion of our board of directors and will depend on our results of operations, capital requirements, financial condition, prospects, contractual arrangements, any limitations on payment of dividends present in our current and future debt agreements, and other factors that our board of directors may deem relevant. We may also be subject to covenants under future debt arrangements that place restrictions on our ability to pay dividends.

## CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of December 31, 2016:

- on an actual basis;
- on a pro forma basis to reflect (1) the reclassification of all of our outstanding shares of existing common stock into an equal number of shares of Class B common stock and the conversion of all outstanding shares of our preferred stock into an aggregate of 18,163,158 shares of Class B common stock as if such reclassification and conversion had occurred on December 31, 2016, (2) the reclassification to stockholders' (deficit) equity of our preferred stock warrant liability in connection with the conversion of our outstanding preferred stock warrant into a Class B common stock warrant as if such reclassification had occurred on December 31, 2016, (3) the accrual of a cumulative dividend of \$7.2 million payable concurrent with the conversion of our Series A preferred stock into Class B common stock to the holders of our Series A preferred stock, which has been calculated as if the conversion had occurred on December 31, 2016, (4) an increase to additional paid-in capital and accumulated deficit of \$4.8 million related to cumulative stock-based compensation expense to be incurred in connection with this offering for our stock options with a liquidity event condition and (5) the filing of our amended and restated certificate of incorporation, each of which will occur in each case, immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis to reflect the pro forma items described immediately above and (1) the sale of \_\_\_\_\_ shares of Class A common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, (2) repayment of our outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank and (3) the cash payment of the accrued dividend described above.

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You should read this table together with “Selected Consolidated Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	As of December 31, 2016		
	Actual	Pro Forma	Pro Forma As Adjusted <sup>(1)</sup>
	(in thousands, except share and per share data)		
Cash and cash equivalents	\$ 31,143	\$ 31,143	\$
Long-term debt, including current portion	\$ 20,000	\$ 20,000	\$
Preferred stock warrant liability	850	—	
Series A preferred stock dividend	—	7,208	
Convertible preferred stock:			
Series A convertible preferred stock, \$0.0001 par value per share; 12,127,468 shares authorized, 12,043,108 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	17,915	—	
Series B convertible preferred stock, \$0.0001 par value per share; 6,120,050 shares authorized, issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	37,500	—	
Stockholders’ (deficit) equity:			
Common stock, \$0.0001 par value per share; 61,462,320 shares authorized, 34,274,718 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	3	—	
Class A common stock, \$0.0001 par value per share; no shares authorized, issued or outstanding, actual; 500,000,000 shares authorized, no shares issued and outstanding, pro forma; 500,000,000 shares authorized, shares issued and outstanding, pro forma as adjusted	—	—	
Class B common stock, \$0.0001 par value per share; no shares authorized, issued or outstanding, actual; 100,000,000 shares authorized, 52,437,876 shares issued and outstanding, pro forma; 100,000,000 shares authorized, shares issued and outstanding, pro forma as adjusted	—	5	
Additional paid-in capital	—	53,860	
Accumulated other comprehensive income	1,330	1,330	
Accumulated deficit	(64,825)	(69,630)	
Total stockholders’ (deficit) equity	(63,492)	(14,435)	
Total capitalization	\$ 12,773	\$ 12,773	\$

(1) The pro forma as adjusted information set forth above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders’ (deficit) equity and total capitalization by approximately \$ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase or decrease in the number of shares offered by us would increase or decrease pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders’ (deficit) equity and total capitalization by approximately \$ million, assuming that the assumed initial offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions.

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The outstanding share information in the table above excludes:

- 6,784,448 shares of Class B common stock issuable upon the exercise of options outstanding as of December 31, 2016, at a weighted-average exercise price of \$4.65 per share;
- 84,360 shares of Class B common stock issuable upon the exercise of a warrant outstanding as of December 31, 2016, at an exercise price of \$0.88905 per share;
- 1,629,322 shares of Class B common stock reserved for future issuance under the 2007 Stock Option Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective; and
- shares of Class A common stock reserved for future issuance pursuant to our 2017 Equity Incentive Plan, which will become effective prior to the closing of this offering and will include provisions that automatically increase the number of shares of Class A common stock reserved for issuance thereunder each year.

## DILUTION

If you invest in our Class A common stock, your interest will be diluted to the extent of the difference between the initial public offering price per share of our Class A common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after the closing of this offering.

Our historical net tangible book value as of December 31, 2016 was \$(63.5) million, or \$(1.85) per share of common stock. Our historical net tangible book value per share represents our total tangible assets less our total liabilities and preferred stock (which is not included within stockholders' deficit), divided by the number of shares of common stock outstanding as of December 31, 2016.

Our pro forma net tangible book value as of December 31, 2016 was \$(14.4) million, or \$(0.28) per share of common stock. Pro forma net tangible book value per share represents our total tangible assets less our total liabilities, divided by the number of shares of Class A common stock and Class B common stock outstanding as of December 31, 2016, after giving effect to (1) the reclassification of all of our outstanding shares of existing common stock into an equal number of shares of Class B common stock and the conversion of all outstanding shares of our preferred stock into an aggregate of 18,163,158 shares of Class B common stock immediately prior to the closing of this offering as if such reclassification and conversion had occurred on December 31, 2016, (2) the reclassification to stockholders' of our preferred stock warrant liability in connection with the conversion of our outstanding preferred stock warrant into a Class B common stock warrant as if such reclassification had occurred on December 31, 2016, and (3) the accrual of a cumulative dividend of \$7.2 million payable concurrent with the conversion of our Series A preferred stock into Class B common stock to the holders of our Series A preferred stock, which has been calculated as if the conversion of Series A preferred stock into Class B common stock occurred as of December 31, 2016. Each of these actions will occur immediately prior to the completion of this offering.

Our pro forma as adjusted net tangible book value represents our pro forma net tangible book value, plus the effect of (1) the sale of \_\_\_\_\_ shares of Class A common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, (2) repayment of our outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank. Our pro forma as adjusted net tangible book value as of December 31, 2016 was \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share of common stock. This amount represents an immediate increase in pro forma net tangible book value of \$ \_\_\_\_\_ per share to our existing stockholders and an immediate dilution of \$ \_\_\_\_\_ per share to investors participating in this offering and (3) the cash payment of the accrued dividend described above. We determine dilution per share to investors participating in this offering by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by investors participating in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per share	\$
Historical net tangible book value per share as of December 31, 2016	\$(1.85)
Increase per share attributable to the pro forma adjustments described above	<u>1.57</u>
Pro forma net tangible book value per share as of December 31, 2016	(0.28)
Increase in pro forma net tangible book value per share attributed to new investors purchasing shares from us in this offering	<u>          </u>
Pro forma as adjusted net tangible book value per share after giving effect to this offering	
Dilution in pro forma as adjusted net tangible book value per share to new investors in this offering	<u><u>          </u></u>

The pro forma as adjusted dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase

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or decrease in the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted net tangible book value per share by \$ \_\_\_\_\_ per share and the dilution per share to investors participating in this offering by \$ \_\_\_\_\_ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase the pro forma as adjusted net tangible book value per share by \$ \_\_\_\_\_ and decrease the dilution per share to investors participating in this offering by \$ \_\_\_\_\_, assuming the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. A 1,000,000 share decrease in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the pro forma as adjusted net tangible book value per share after this offering by \$ \_\_\_\_\_ and increase the dilution per share to new investors participating in this offering by \$ \_\_\_\_\_, assuming the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions.

If the underwriters exercise their over-allotment option in full to purchase an additional \_\_\_\_\_ shares of our Class A common stock in this offering, the pro forma as adjusted net tangible book value of our common stock would increase to \$ \_\_\_\_\_ per share, representing an immediate increase to existing stockholders of \$ \_\_\_\_\_ per share and an immediate dilution of \$ \_\_\_\_\_ per share to investors participating in this offering.

The following table summarizes as of December 31, 2016, on the pro forma as adjusted basis described above, the number of shares of our Class A common stock and Class B common stock, the total consideration and the average price per share (1) paid to us by our existing stockholders and (2) to be paid by investors purchasing our Class A common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing Class B stockholders		%	\$	%	\$
Investors purchasing Class A common stock					\$
<b>Total</b>		<u>100.0%</u>	<u>\$</u>	<u>100.0%</u>	

If the underwriters exercise their over-allotment option in full, the number of shares held by the existing stockholders after this offering would be reduced to \_\_\_\_\_ shares, or \_\_\_\_\_ % of the total number of shares of our Class A common stock and Class B common stock outstanding after this offering, and the number of shares held by new investors would increase to \_\_\_\_\_ shares, or \_\_\_\_\_ % of the total number of shares of our Class A common stock and Class B common stock outstanding after this offering.

The outstanding share information used in the computations above excludes:

- 6,784,448 shares of Class B common stock issuable upon the exercise of options outstanding as of December 31, 2016, at a weighted-average exercise price of \$4.65 per share;
- 84,360 shares of Class B common stock issuable upon the exercise of a warrant outstanding as of December 31, 2016, at an exercise price of \$0.88905 per share;
- 1,629,322 shares of Class B common stock reserved for future issuance under the 2007 Stock Option Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective; and

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- shares of Class A common stock reserved for future issuance pursuant to our 2017 Equity Incentive Plan, which will become effective prior to the closing of this offering and will include provisions that automatically increase the number of shares of Class A common stock reserved for issuance thereunder each year.

To the extent that outstanding options or warrants are exercised, new options or other securities are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

**SELECTED CONSOLIDATED FINANCIAL DATA**

We derived the selected consolidated statements of operations data for the years ended December 31, 2014, 2015 and 2016 and the selected consolidated balance sheet data as of December 31, 2015 and 2016 from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future.

When you read this selected consolidated financial data, it is important that you read it together with the historical consolidated financial statements and related notes to those statements, as well as “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included elsewhere in this prospectus.

	Year Ended December 31,		
	2014	2015	2016
(in thousands, except share and per share data)			
<b>Consolidated Statements of Operations Data:</b>			
Revenue:			
Subscriptions, software and support	\$ 37,076	\$ 53,207	\$ 69,972
Professional services	51,920	57,997	62,951
<b>Total revenue</b>	<b>88,996</b>	<b>111,204</b>	<b>132,923</b>
Cost of revenue:			
Subscriptions, software and support	4,273	6,079	7,437
Professional services	32,524	42,402	42,686
<b>Total cost of revenue</b>	<b>36,797</b>	<b>48,481</b>	<b>50,123</b>
Gross profit	52,199	62,723	82,800
Operating expenses:			
Sales and marketing	29,088	38,300	54,137
Research and development	13,488	16,750	22,994
General and administrative	23,373	12,515	17,039
<b>Total operating expenses</b>	<b>65,949</b>	<b>67,565</b>	<b>94,170</b>
Operating loss	(13,750)	(4,842)	(11,370)
Other expense:			
Other expense, net	2,086	1,579	1,792
Interest expense	19	188	982
<b>Total other expense</b>	<b>2,105</b>	<b>1,767</b>	<b>2,774</b>
Net loss before income taxes	(15,855)	(6,609)	(14,144)
Income tax expense (benefit)	1,204	378	(1,683)
Net loss	(17,059)	(6,987)	(12,461)
Accretion of dividends on convertible preferred stock	856	861	857
<b>Net loss attributable to common stockholders</b>	<b>\$ (17,915)</b>	<b>\$ (7,848)</b>	<b>\$ (13,318)</b>
Net loss per share attributable to common stockholders, basic and diluted <sup>(1)</sup>	\$ (0.50)	\$ (0.23)	\$ (0.39)
Weighted-average common shares outstanding, basic and diluted	35,717,803	34,274,718	34,274,718
Pro forma net loss per share attributable to common stockholders, basic and diluted <sup>(2)</sup>			\$
Pro forma weighted-average common shares outstanding, basic and diluted <sup>(2)</sup>			

(1) See note 9 to our consolidated financial statements appearing elsewhere in this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders.

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- (2) Pro forma basic and diluted net loss per share represents net loss divided by the pro forma weighted-average shares of common stock outstanding. Pro forma weighted-average shares outstanding reflects (a) the conversion of all outstanding shares of convertible preferred stock into an aggregate of 18,163,158 shares of Class B common stock as of January 1, 2016 or at the time of issuance, if later, (b) the reclassification of our preferred stock warrant liability to stockholders' deficit as of January 1, 2016, (c) the number of additional shares whose proceeds would be necessary to pay the cumulative dividend of \$7.2 million payable upon conversion of the Series A convertible preferred stock, which amount will be paid immediately prior to the closing of this offering, based on an assumed offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus and (d) the number of additional shares whose proceeds would be necessary to repay all outstanding principal and interest and the termination fee related to our long-term debt, based on an assumed offering price of \$ per share, the midpoint of the price range set forth on the cover of this prospectus. The amounts recorded during the year ended December 31, 2016 to reflect the accretion of dividends on convertible preferred stock and to adjust the preferred stock warrant liability to fair value, as well as interest expense recorded during the year ended December 31, 2016 related to our long-term debt, net of tax, have been added back to net loss attributable to common stockholders to arrive at pro forma net loss attributable to common stockholders.

	As of December 31,			Pro forma as adjusted <sup>(2)(3)</sup>
	2015	Actual	2016 Pro forma <sup>(1)</sup>	
(in thousands)				
<b>Consolidated Balance Sheet Data:</b>				
Cash and cash equivalents	\$ 31,393	\$ 31,143	\$ 31,143	\$
Working capital <sup>(4)</sup>	19,463	12,365	5,157	
Total assets	83,400	102,738	102,738	
Long-term debt, including current portion	10,000	20,000	20,000	
Deferred revenue, net of current portion	12,890	18,108	18,108	
Preferred stock warrant liability	650	850	—	
Total liabilities	79,375	110,815	117,173	
Convertible preferred stock	54,558	55,415	—	
Accumulated deficit	(51,507)	(64,825)	(69,630)	
Total stockholders' (deficit) equity	(50,533)	(63,492)	(14,435)	

- (1) Pro forma consolidated balance sheet data reflects (a) the reclassification of all of our outstanding shares of existing common stock and the conversion of all outstanding shares of preferred stock into Class B common stock immediately prior to the closing of this offering as if such reclassification and conversion had occurred on December 31, 2016, (b) the reclassification to stockholders' (deficit) equity of our preferred stock warrant liability in connection with the conversion of our outstanding preferred stock warrant into a Class B common stock warrant, (c) the accrual of the cumulative dividend of \$7.2 million payable concurrent with the conversion of our Series A preferred stock into Class B common stock to the holders of our Series A preferred stock, which has been calculated as if the conversion of Series A preferred stock into Class B common stock occurred as of December 31, 2016 and (d) an increase to additional paid-in capital and accumulated deficit of \$4.8 million related to cumulative stock-based compensation expense to be incurred in connection with this offering for our stock options with a liquidity event condition. Each of these actions will occur immediately prior to the completion of this offering. As the cumulative dividend represents a distribution to existing stockholders to be made from the proceeds of this offering, the pro forma consolidated balance sheet data reflects the accrual of the estimated dividend to be paid.
- (2) Pro forma as adjusted consolidated balance sheet data reflects the pro forma items described immediately above and (a) our sale of shares of Class A common stock in this offering at an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, (b) repayment of our outstanding principal and interest, together with a termination fee, under our term loan with Silicon Valley Bank and (c) the cash payment of the cumulative dividend described in note (1) above.
- (3) Pro forma as adjusted consolidated balance sheet data is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately \$ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase or decrease in the number of shares offered by us would increase or decrease pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately \$ million, assuming that the assumed initial offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions.
- (4) We define working capital as current assets less current liabilities. See our consolidated financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.*

### Overview

Appian provides a leading low-code software development platform as a service that enables organizations to rapidly develop powerful and unique applications. The applications created on our platform help companies drive digital transformation and competitive differentiation.

With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface with little or no coding required. Our customers have used applications built on our low-code platform to launch new business lines, automate vital employee workflows, manage complex trading platforms, accelerate drug development and build global procurement systems. With our platform, decision makers can reimagine their products, services, processes and customer interactions by removing much of the complexity and many of the challenges associated with traditional approaches to software development.

We were formed in 1999 by Matthew Calkins, Robert Kramer, Marc Wilson and Michael Beckley, each of whom remain actively engaged in the management of our company, and we released our first software product in 2000. In 2004, we released the Appian Business Process Management Suite, with an innovative web-based, integrated development environment. We launched our cloud offering in 2007. We continued to enhance and evolve the Appian platform with our Records data management technology in 2012 and our patented Self-Assembling Interface Layer, or SAIL, technology in 2013. Our SAIL technology allows applications developed on our platform to be immediately and natively deployed across a full range of mobile and desktop devices with no additional customization, including desktop web browsers, tablets and mobile phones. In 2016, we introduced Quick Apps, which enables non-professional developers to develop native web and mobile applications in minutes with no coding.

In 2016, we generated the majority of our revenue from sales of subscriptions, software and support, which include (1) SaaS subscriptions bundled with maintenance and support and hosting services, and (2) term license subscriptions bundled with maintenance and support. To a lesser extent, we also generate revenue from the sale of perpetual software license agreements and associated maintenance and support agreements.

Our subscription fees are based primarily on the number of users who access and utilize the applications built on our platform. Our customer contracts terms vary from one to five years, with an average length of three years, with most providing for payment in advance on an annual, quarterly or monthly basis. Due to the variability of our billing terms and the episodic nature of our customers purchasing additional subscriptions, we do not believe that changes in our deferred revenue in a given period are directly correlated with our revenue growth.

Since inception, we have invested in our professional services organization to help ensure that customers are able to build and deploy applications on our platform. We have several strategic partnerships, including with Deloitte, KPMG and PricewaterhouseCoopers for them to refer customers to us and then to provide professional services directly to the customers using our platform. We intend to further grow our base of strategic partners to

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provide broader customer coverage and solution delivery capabilities. In addition, over time we expect professional services revenue as a percentage of total revenue to decline as we increasingly rely on strategic partners to help our customers deploy our software. We believe our investment in professional services, including strategic partners building their practices around Appian, will drive increased adoption of our platform.

Our go-to-market strategy consists of both direct sales and, to a lesser extent, sales through strategic partners. As of December 31, 2016, we had 280 customers in a wide variety of industries, of which 225 customers were commercial and 55 customers were government or non-commercial entities. Our customers include financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation organizations. Generally, our sales force targets its efforts to organizations with over 1,000 employees and \$1 billion in annual revenue. As of December 31, 2016, 32% of our commercial customers were Global 2000 organizations, and included 37 Fortune 500 companies, six of the largest 25 global financial services firms by 2016 revenue and eight of the 30 largest global healthcare companies by 2016 revenue. Revenue from government entities represented approximately 26% of our total revenue in 2016. No single end-customer accounted for more than 10% of our total revenue in 2015 or 2016, although we had one customer that accounted for 10.7% of our total revenue in 2014.

Our platform is designed to be natively multi-lingual to facilitate collaboration and address challenges in multi-national organizations. We offer our platform globally. In 2016, 19.5% of our total revenue was generated from customers outside of the United States. Today, we operate in 11 countries. We believe that we have a significant opportunity to grow our international footprint. We are investing in new geographies, including through investment in direct and indirect sales channels, professional services and customer support and implementation partners.

We have experienced strong revenue growth, with revenue of \$89.0 million, \$111.2 million and \$132.9 million in 2014, 2015 and 2016, respectively. Our subscription revenue was \$22.8 million, \$41.5 million and \$60.0 million in 2014, 2015 and 2016, respectively.

We have invested in developing our platform, expanding our sales and marketing and research and development capabilities, and providing general and administrative resources to support our growth. We intend to continue to invest in our business to take advantage of our market opportunity. As a result, we incurred net losses of \$17.1 million, \$7.0 million and \$12.5 million in 2014, 2015 and 2016, respectively. We also had operating cash flows of \$1.5 million, \$(2.1) million and \$(7.8) million in 2014, 2015 and 2016, respectively.

### **Our Business Model**

Our business model focuses on maximizing the lifetime value of customer relationships, which is a function of the duration of a customer's deployment of Appian as well as the price and number of subscriptions of Appian that a customer purchases. The costs we incur with respect to any customer may exceed revenue from that customer in earlier periods because we generally recognize costs associated with customer acquisition faster than we generate and recognize the associated revenue. We incur significant customer acquisition costs, including expense associated with hiring new sales representatives, who generally take more than one year to become productive given the length of our sales cycle, and marketing costs, all of which are expensed as incurred. Our customer contract terms vary from one to five years, with an average length of three years, with most providing for payment in advance on an annual, quarterly or monthly basis, and we recognize subscription revenue ratably over the term of the subscription period.

At the same time, we believe that the costs we incur to retain customers and drive additional purchases of software are lower than our customer acquisition costs on a relative basis. Over time, we expect a large portion of our customers to renew their subscriptions and purchase additional subscriptions as they continue to build more applications and add more users to our platform. We also expect the proportion of annual revenue from existing customers to grow relative to annual revenue from new customers. We believe this mix shift over time will have a positive impact on our operating margins, as we expect the percentage of revenue spent on sales and marketing to decline.

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We measure the effectiveness of our business model by comparing the lifetime value of our customer relationships to our customer acquisition costs. We calculate lifetime customer value as (1) average gross margin multiplied by average subscription and maintenance and support revenue from customers for a given month divided by (2) the average percentage of monthly recurring revenue that did not renew in each month for the previous 12 months. We then divide this calculated lifetime customer value by our customer acquisition cost, which is the total sales and marketing expense incurred during the corresponding month. On a rolling twelve month basis, we estimate that for each of 2014, 2015 and 2016 the average lifetime value of a customer has exceeded 6x the associated average cost of acquiring them.

### **Key Factors Affecting Our Performance**

#### ***Market Adoption of Our Platform***

Our ability to grow our customer base and drive market adoption of our platform is affected by the pace at which organizations digitally transform. We expect that our revenue growth will be primarily driven by the pace of adoption and penetration of our platform. We offer a leading custom software development platform and intend to continue to invest to expand our customer base. The degree to which prospective customers recognize the need for low-code software that enables organizations to digitally transform, and subsequently allocate budget dollars to purchase our software, will drive our ability to acquire new customers and increase sales to existing customers, which, in turn, will affect our future financial performance.

#### ***Number of Customers***

We believe we have a substantial opportunity to grow our customer base. We define a customer as an entity with an active subscription or maintenance and support contract related to a perpetual software license as of the specified measurement date. To the extent we contract with one or more entities under common control, we count those entities as separate customers. We have aggressively invested, and intend to continue to invest, in our sales force in order to drive sales to new customers. In particular, we have recently made, and plan to continue to make, investments to enhance the expertise of our sales and marketing organization within our key industry verticals of financial services, healthcare and government. In addition, we have established relationships with strategic partners who work with organizations undergoing digital transformations. We had a total customer count of 254, 266 and 280 as of December 31, 2014, 2015 and 2016, respectively, which includes customers with active software subscription agreements or with maintenance and support contracts, and our number of customers with active software subscription agreements was 142, 178 and 206 as of December 31, 2014, 2015 and 2016, respectively. As of December 31, 2016, 32% of our commercial customers were Global 2000 organizations, and included 37 Fortune 500 companies, six of the largest 25 global financial services firms by 2016 revenue and eight of the 30 largest global healthcare companies by 2016 revenue. Our ability to continue to grow our customer base is dependent, in part, upon our ability to compete within the increasingly competitive markets in which we participate.

#### ***Further Penetration of Existing Customers***

Our sales force seeks to generate additional revenue from existing customers by adding new users to our platform. Many of our customers begin by building a single application and then grow to build dozens of applications on our platform. Generally, the development of new applications on our platform results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we charge subscription fees on a per-user basis for the significant majority of our customer contracts. As a result of this “land and expand” strategy, we have generated significant additional revenue from our customer base. For example, customers that first purchased our software prior to January 1, 2014, or the Customer Cohort, and were still customers on December 31, 2016, increased approximately seven times, on average, their purchases with us over that period, as measured by total contract value. Within the Customer Cohort, our top 25 customers as of December 31, 2016 increased their purchases with us by approximately 13 times, on average, over the same period, applying the same methodology. Our ability to increase sales to existing customers will depend on a number of factors, including the size of our sales force and professional services teams, customers’ level of satisfaction with our platform and professional services, pricing, economic conditions and our customers’ overall spending levels.

### ***Mix of Subscription and Professional Services Revenue***

We believe our professional services have driven customer success and facilitated the adoption of our platform by customers. During the initial period of deployment by a customer, we generally provide a greater amount of support in building applications and training than later in the deployment, with a typical engagement extending from two to six months. At the same time, many of our customers have historically purchased subscriptions only for a limited set of their total potential end users. As a result of these factors, the proportion of total revenue for a customer associated with professional services is relatively high during the initial deployment period. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue. In addition, we intend to further grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. These partners perform professional services with respect to any new service contracts they sign. As we expand the network of strategic partners, we expect the proportion of our total revenue from subscription revenue to increase over time relative to professional services revenue.

### ***Investments in Growth***

We have made and plan to continue to make investments for long-term growth, including investment in our platform and infrastructure to continuously maximize the power and simplicity of the platform to meet the evolving needs of our customers and to take advantage of our market opportunity. For example, we have increased our sales and marketing headcount from 84 as of January 1, 2014 to 238 as of December 31, 2016 and increased our research and development headcount from 50 as of January 1, 2014 to 146 as of December 31, 2016. We intend to continue to increase our investment in sales and marketing, as we further expand our sales teams, increase our marketing activities and grow our international operations. We expect to use a portion of the proceeds from this offering to fund these growth strategies.

### **Other Metrics**

We monitor the following metrics to help us measure and evaluate the effectiveness of our operations (dollars in thousands):

	Year Ended December 31,		
	2014	2015	2016
Subscription Revenue	\$22,849	\$41,497	\$59,993
Subscription Revenue Retention Rate	107%	128%	112%

### ***Subscription Revenue***

Subscription revenue is a portion of our revenue contained in the subscriptions, software and support revenue line of our consolidated statements of operations, and include (1) software as a service, or SaaS, subscriptions bundled with maintenance and support and hosting services, and (2) term license subscriptions bundled with maintenance and support. As we generally sell our software on a per-user basis, our subscription revenue for any customer is primarily determined by the number of users who access and utilize the applications built on our platform, as well as the price paid. We believe that increasing our subscription revenue is an indicator of the demand for our platform, the pace at which the market for our solutions is growing, the productivity of our sales force and strategic relationships in growing our customer base, and our ability to further penetrate our existing customer base.

### ***Subscription Revenue Retention Rate***

A key factor to our success is the renewal and expansion of subscription agreements with our existing customers. We calculate this metric over a set of customers who have been with us for at least one full year. To calculate our subscription revenue retention rate for a particular trailing 12-month period, we first establish the

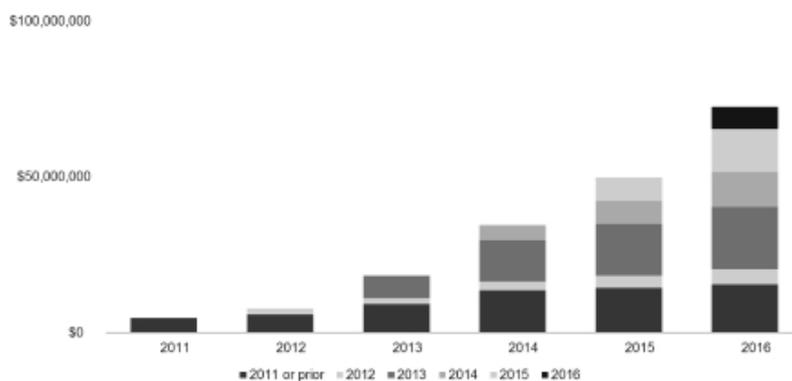
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recurring subscription revenue for the previous trailing 12-month period. This effectively represents recurring dollars that we should expect in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period without any expansion or contraction. We subsequently measure the recurring subscription revenue in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period. Subscription revenue retention rate is then calculated by dividing the aggregate recurring subscription revenue in the current trailing 12-month period by the previous trailing 12-month period. This calculation includes the impact on our revenue from customer non-renewals, pricing changes and growth in the number of users on our platform. Our subscription revenue retention rate can fluctuate from period to period due to large customer contracts in any given period. For example, our subscription revenue retention rate in 2015 was impacted by a single upsell that was one-time in nature.

### Customer Cohort Analysis

We focus on acquiring new customers and growing our relationships with existing customers over time. The chart below illustrates our history of attracting new customers and expanding our revenue from them over time as they realize the benefits of building applications using our software.

*Cohort Analysis—Subscription Software Revenue*



The chart reflects annualized subscription revenue for the group of customers that became our customers in each respective cohort year. For instance, the 2013 cohort includes all customers whose contract start date was between January 1, 2013 and December 31, 2013. Annualized subscription revenue is the total amount of monthly subscription revenue for that applicable customer cohort in January of the following year multiplied by 12. We use January revenue data for the cohort of customers who first signed subscription agreements in the preceding year because January is the first month in which we are earning a full month of revenue from all such customers. Our annualized subscription revenue for the year ended December 31, 2016 for our 2013 customer cohort represented a 2.8 times increase over the annualized subscription revenue for the year ended December 31, 2013 for that 2013 customer cohort. Building upon this success, we believe a significant opportunity exists for us to acquire new customers as well as expand the use of our platform by increasing the number of users within our current customers' organizations.

### Key Components of Results of Operations

#### Revenue

We generate revenue primarily through sales of subscriptions to our platform, as well as professional services. We generally sell our software on a per-user basis. We generally bill customers and collect payment for subscriptions to our platform in advance on an annual, quarterly or monthly basis. In certain instances, we have had customers pay their entire contract value up front.

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Our revenue is comprised of the following:

### *Subscriptions, Software and Support*

Subscriptions, software and support revenue is primarily derived from:

- SaaS subscriptions bundled with maintenance and support and hosting services; and
- on-premises term license subscriptions bundled with maintenance and support.

To a lesser extent, we also generate revenue from the sale of perpetual software license agreements and associated maintenance and support.

Our maintenance and support agreements provide customers with the right to unspecified software upgrades, maintenance releases and patches released during the term of the maintenance and support agreement on a when-and-if-available basis, and rights to technical support. When our platform is deployed within a customer's own data center or private cloud, it is installed on the customer's infrastructure and offered as a term or perpetual license. When our platform is delivered as a SaaS subscription, we handle its operational needs in a third-party hosted data center.

### *Professional Services*

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance and training related to our platform. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue. We have several strategic partnerships, including with Deloitte, KPMG and PricewaterhouseCoopers. Our agreements with our strategic partners have indefinite terms and may be terminated for convenience by either party. We intend to further grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. These partners refer software subscription customers to us and perform professional services with respect to any new service contracts they originate, increasing our software subscription revenues without any change to our professional services revenues. As we expand the network of strategic partners, we expect professional services revenue to decline as a percentage of total revenue over time since our strategic partners may perform professional services associated with software subscriptions that we sell.

### **Cost of Revenue**

#### *Subscriptions, Software and Support*

Cost of subscriptions, software and support revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, employee-related costs, including payroll and benefits for our technology operations and customer support teams, and allocated overhead. We expect cost of revenue to continue to increase in absolute dollars for the foreseeable future as our customer base grows.

#### *Professional Services*

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, travel costs and allocated overhead. The unpredictability of the timing of entering into significant professional services agreements sold on a standalone basis may cause significant fluctuations in our quarterly financial results.

### **Gross Margin**

Gross profit and gross margin, or gross profit as a percentage of total revenue, has been, and will continue to be, affected by various factors, including the mix of subscription, software and support revenue and professional services revenue. Subscription pricing, the costs associated with third-party hosting facilities, and the extent to which we expand our professional services to support future growth will impact our gross margins. Our gross margin may fluctuate from period to period based on the above factors.

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*Subscriptions, Software and Support Gross Margin.* Subscription, software and support gross margin is primarily affected by the growth in our subscription, software and support revenue as compared to the growth in, and timing of, costs to support such revenue. We expect to continue to invest in the customer support and SaaS operations to support the growth in the business and the timing of those investments is expected to cause gross margins to fluctuate in the short term but improve over time.

*Professional Services Gross Margin.* Professional services gross margin is affected by the growth in our professional services revenue as compared to the growth in, and timing of, the cost of our professional services organization as we continue to invest in the growth of our business. Professional services gross margin is also impacted by the ratable recognition of some of our professional services revenue as compared to the recognition of related costs of services in the period incurred.

### ***Operating Expenses***

Operating expenses consist of sales and marketing, research and development and general and administrative expenses. Salaries, bonuses and other personnel related costs are the most significant components of each of these expense categories. We grew from 298 employees at January 1, 2014 to 720 employees at December 31, 2016, and we expect to continue to hire new employees in order to support our anticipated revenue growth. We have not historically incurred stock-based compensation expense as all outstanding options to purchase common stock have a vesting condition that is triggered upon a change of control transaction or an initial public offering of our common stock. In connection with the completion of this offering, we will incur a material one-time stock-based compensation expense due to the performance condition associated with our stock options becoming probable. If the performance condition had occurred on December 31, 2016, we would have recorded an estimated \$        million of stock-based compensation expense related to these options.

### ***Sales and Marketing Expense***

Sales and marketing expense primarily includes personnel costs, including salaries, bonuses, commissions and other personnel costs related to sales teams. Additional expenses in this category include travel and entertainment, marketing and promotional events, marketing activities, subcontracting fees and allocated overhead.

The number of employees in sales and marketing functions grew from 84 at January 1, 2014 to 238 at December 31, 2016. In order to continue to grow our business, geographical footprint and brand awareness, we expect to continue investing resources in sales and marketing by increasing the number of sales and account management teams. As a result, we expect sales and marketing expense to increase in absolute dollars as we continue to invest to acquire new customers and further expand usage of our platform within our existing customer base.

### ***Research and Development Expense***

Research and development expense consists primarily of personnel costs for our employees who develop and enhance our platform, including salaries, bonuses and other personnel costs. Also included are non-personnel costs such as subcontracting, consulting and professional fees to third party development resources, allocated overhead and depreciation and amortization costs.

Our research and development efforts are focused on enhancing the speed and power of our software platform. The number of employees in research and development functions grew from 50 at January 1, 2014 to 146 at December 31, 2016. We expect research and development expenses to continue to increase as they are critical to maintain and improve our quality of applications and our competitive position.

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### *General and Administrative Expense*

General and administrative expense consists primarily of personnel costs, including salaries, bonuses and other personnel costs for our administrative, legal, information technology, human resources, finance and accounting employees and executives. Additional expenses included in this category are non-personnel costs, such as travel-related expenses, subcontracting and professional fees, audit fees, tax services and legal fees, as well as insurance and other corporate expenses, along with allocated overhead.

In February 2014, we repurchased shares of our common stock from some of our stockholders using the proceeds from a preferred stock financing. The fair value of our common stock in February 2014 was determined to be lower than the repurchase price. The difference between the repurchase price and the fair value of the common stock was recognized as compensation expense. See note 7 to our consolidated financial statements appearing elsewhere in this prospectus for further details regarding this transaction.

The number of employees in general and administrative functions grew from 37 at January 1, 2014 to 86 at December 31, 2016. We expect our general and administrative expense to increase in absolute dollars as we continue to support our growth. We also anticipate that we will incur additional costs for personnel and consulting and professional fees related to preparation to become and operate as a public company.

### **Results of Operations**

The following table sets forth our consolidated statements of operations data for the years ended December 31 (in thousands):

	<u>2014</u>	<u>2015</u>	<u>2016</u>
<b>Consolidated Statements of Operations Data:</b>			
Revenue:			
Subscriptions, software and support	\$ 37,076	\$ 53,207	\$ 69,972
Professional services	51,920	57,997	62,951
Total revenue	<u>88,996</u>	<u>111,204</u>	<u>132,923</u>
Cost of revenue:			
Subscriptions, software and support	4,273	6,079	7,437
Professional services	32,524	42,402	42,686
Total cost of revenue	<u>36,797</u>	<u>48,481</u>	<u>50,123</u>
Gross profit	52,199	62,723	82,800
Operating expenses:			
Sales and marketing	29,088	38,300	54,137
Research and development	13,488	16,750	22,994
General and administrative	23,373	12,515	17,039
Total operating expenses	<u>65,949</u>	<u>67,565</u>	<u>94,170</u>
Operating loss	(13,750)	(4,842)	(11,370)
Other expense:			
Other expense, net	2,086	1,579	1,792
Interest expense	19	188	982
Total other expense	<u>2,105</u>	<u>1,767</u>	<u>2,774</u>
Net loss before income taxes	(15,855)	(6,609)	(14,144)
Income tax expense (benefit)	1,204	378	(1,683)
Net loss	<u>\$ (17,059)</u>	<u>\$ (6,987)</u>	<u>\$ (12,461)</u>

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The following table sets forth our consolidated statements of operations data expressed as a percentage of total revenue:

	2014	2015	2016
<b>Consolidated Statements of Operations Data:</b>			
Revenue:			
Subscriptions, software and support	41.7%	47.8%	52.6%
Professional services	58.3	52.2	47.4
Total revenue	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Cost of revenue:			
Subscriptions, software and support	4.8	5.5	5.6
Professional services	36.5	38.1	32.1
Total cost of revenue	<u>41.3</u>	<u>43.6</u>	<u>37.7</u>
Gross margin	58.7	56.4	62.3
Operating expenses:			
Sales and marketing	32.7	34.4	40.7
Research and development	15.2	15.1	17.3
General and administrative	26.3	11.3	12.8
Total operating expenses	<u>74.2</u>	<u>60.8</u>	<u>70.8</u>
Operating loss	(15.5)	(4.4)	(8.5)
Other expense:			
Other expense, net	2.3	1.4	1.3
Interest expense	0.0	0.2	0.7
Total other expense	<u>2.3</u>	<u>1.6</u>	<u>2.0</u>
Net loss before income taxes	(17.8)	(6.0)	(10.5)
Income tax expense (benefit)	1.4	0.3	(1.3)
Net loss	<u>(19.2)%</u>	<u>(6.3)%</u>	<u>(9.2)%</u>

### Years Ended December 31, 2014, 2015 and 2016

#### Revenue

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
Revenue:	(dollars in thousands)				
Subscriptions, software and support	\$37,076	\$ 53,207	\$ 69,972	43.5%	31.5%
Professional services	51,920	57,997	62,951	11.7	8.5
Total revenue	<u>\$88,996</u>	<u>\$111,204</u>	<u>\$132,923</u>	25.0	19.5

*2016 Compared to 2015.* Total revenue increased \$21.7 million, or 19.5%, in 2016 compared to 2015, due to an increase in our subscriptions revenue of \$16.8 million and an increase in our professional services revenue of \$4.9 million. The increase in subscription revenue was attributable to \$11.0 million of revenue from expanded deployments and corresponding sales of additional subscriptions to existing customers and \$5.8 million in sales of subscriptions to new customers. The increase in professional services revenue was due to increased application development and deployment assistance demands from our customers.

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*2015 Compared to 2014.* Total revenue increased \$22.2 million, or 25.0%, in 2015 compared to 2014, due to an increase in our subscriptions revenue of \$16.1 million and an increase in our professional services revenue of \$6.1 million. The increase in subscription revenue was attributable to \$12.2 million of revenue from expanded deployments and corresponding sales of additional subscriptions to existing customers and \$3.9 million in sales of subscriptions to new customers. The increase in professional services revenue was due to increased application development and deployment assistance demands from our customers.

### *Cost of Revenue*

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
Cost of revenue	(dollars in thousands)				
Subscriptions, software and support	\$ 4,273	\$ 6,079	\$ 7,437	42.3%	22.3%
Professional services	32,524	42,402	42,686	30.4	0.7
Total cost of revenue	<u>\$36,797</u>	<u>\$48,481</u>	<u>\$50,123</u>	31.8	3.4
Subscriptions, software and support gross margin	88.5%	88.6%	89.4%		
Professional services gross margin	37.4	26.9	32.2		
Total gross margin	58.7	56.4	62.3		

*2016 Compared to 2015.* Cost of revenue increased \$1.6 million, or 3.4%, in 2016 compared to 2015, primarily due to a \$5.8 million increase in professional services and product support staff personnel costs and a \$1.2 million increase in facility and overhead costs, offset by decreases in contractor costs of \$5.4 million. Personnel costs increased due to the increase in professional services and customer support staff personnel headcount by 4.6% from the end of 2015 to the end of 2016. Facility and overhead costs increased to support our personnel growth. Contractor costs decreased from 2015 to 2016 as we incurred additional contractor costs in 2015 to support a new customer contract.

Gross margin increased to 62.3% in 2016 compared to 56.4% in 2015, due primarily to an increase in the gross margin for our professional services. During 2015, we incurred increased contractor costs to support a new customer contract. Professional services gross margin increased in 2016 due to a reduction in our contractor costs of \$5.4 million as compared to 2015 as we continued to hire additional internal professional services personnel.

*2015 Compared to 2014.* Cost of revenue increased \$11.7 million, or 31.8%, in 2015 compared to 2014, primarily due to a \$4.6 million increase in professional services and support staff personnel costs, \$4.7 million increase in contractor costs, \$1.5 million increase in facility and overhead costs, and \$0.8 million in increased cloud support costs. Personnel costs increased due to the increase in professional services and customer support staff personnel headcount by 32.8% from the end of 2014 to the end of 2015. Facility and overhead costs increased to support our personnel growth. Contractor costs increased as we incurred additional contractor costs in 2015 to support a new customer contract. Cloud support costs increased to support our additional sales activity.

Gross margin decreased to 56.4% in 2015 compared to 58.7% in 2014, due primarily to a reduction in the gross margin for our professional services. Professional services gross margin decreased in 2015 due to a temporary increase in contractor costs of \$4.7 million to support a new customer contract.

**Sales and Marketing Expense**

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
	(dollars in thousands)				
Sales and marketing	\$29,088	\$38,300	\$54,137	31.7%	41.3%
% of revenue	32.7%	34.4%	40.7%		

*2016 Compared to 2015.* Sales and marketing expense increased \$15.8 million, or 41.3%, in 2016 compared to 2015, primarily due to a \$9.8 million increase in sales and marketing personnel costs, \$3.3 million increase in facility and overhead costs, and \$2.3 million increase in marketing costs. Personnel costs increased due to the increase in sales and marketing personnel headcount by 46.0% from the end of 2015 to the end of 2016 and increased sales commissions driven by our revenue growth. Facility and overhead costs increased to support our personnel growth. Marketing costs increased due to a rise in marketing event sponsorship and attendance.

*2015 Compared to 2014.* Sales and marketing expense increased \$9.2 million, or 31.7%, in 2015 compared to 2014, primarily due to a \$6.8 million increase in sales and marketing personnel costs, \$2.5 million increase in facility and overhead costs, and \$1.5 million increase in marketing costs, offset by a \$1.1 million decrease in compensation costs and \$0.5 million decrease in contractor costs. Personnel costs increased due to the increase in sales and marketing personnel headcount by 23.5% from the end of 2014 to the end of 2015 and increased sales commissions driven by our revenue growth. Facility and overhead costs increased to support our personnel growth. Marketing costs increased due to a rise in marketing event sponsorship and attendance. We recorded \$1.1 million of compensation expense for sales and marketing personnel in 2014 related to the stock repurchase transaction described above, which did not recur in 2015. Contractor costs decreased in 2015 as we continued to hire additional internal marketing personnel.

**Research and Development Expense**

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
	(dollars in thousands)				
Research and development	\$13,488	\$16,750	\$22,994	24.2%	37.3%
% of revenue	15.2%	15.1%	17.3%		

*2016 Compared to 2015.* Research and development expense increased \$6.2 million, or 37.3%, in 2016 compared to 2015, primarily due to a \$4.7 million increase in research and development personnel costs and \$1.4 million increase in facility and overhead costs. Personnel costs increased due to the increase in research and development personnel headcount by 41.7% from the end of 2015 to the end of 2016. Facility and overhead costs increased to support our personnel growth.

*2015 Compared to 2014.* Research and development expense increased \$3.3 million, or 24.2%, in 2015 compared to 2014, primarily due to a \$3.5 million increase in personnel costs, offset by a \$0.3 million decrease in contractor costs. Personnel costs increased due to the increase in research and development personnel headcount by 19.8% from the end of 2014 to the end of 2015. Contractor costs decreased in 2015 as we continued to hire additional internal research and development personnel.

**General and Administrative Expense**

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
	(dollars in thousands)				
General and administrative	\$23,373	\$12,515	\$17,039	(46.5)%	36.1%
% of revenue	26.3%	11.3%	12.8%		

*2016 Compared to 2015.* General and administrative expense increased \$4.5 million, or 36.1%, in 2016 compared to 2015, primarily due to a \$2.5 million increase in general and administrative personnel costs, \$1.1 million increase in facility and overhead costs, and \$0.9 million in increased professional services costs. Personnel costs increased due to the increase in general and administrative personnel headcount by 32.3% from the end of 2015 to the end of 2016. Facility and overhead costs as well as contractor costs increased to support our personnel growth.

*2015 Compared to 2014.* General and administrative expense decreased \$10.9 million, or 46.5%, in 2015 compared to 2014, primarily due to a \$13.0 million decrease in compensation costs, offset by a \$1.1 million increase in general and administrative personnel costs, \$0.6 million increase in contractor costs and a \$0.4 million increase in facility and overhead costs. We recorded \$13.0 million of compensation expense for general and administrative personnel in 2014 related to the stock repurchase transaction described above, which did not recur in 2015. Personnel costs increased due to the increase in general and administrative personnel headcount by 22.6% from the end of 2014 to the end of 2015. Facility and overhead costs as well as contractor costs increased to support our personnel growth.

**Other Expense**

	Year Ended December 31,			% Change	
	2014	2015	2016	2015 vs. 2014	2016 vs. 2015
	(dollars in thousands)				
Other expense, net	\$2,086	\$1,579	\$1,792	(24.3)%	13.5%
% of revenue	2.3%	1.4%	1.3%		
Interest expense	\$ 19	\$ 188	\$ 982	NM	NM
% of revenue	0.0%	0.2%	0.7%		

NM – not meaningful

*2016 Compared to 2015.* Other expense, net increased \$0.2 million, or 13.5%, in 2016 compared to 2015, primarily due to an increase in realized and unrealized foreign currency transaction losses of \$0.2 million. Interest expense increased \$0.8 million in 2016 compared to 2015, primarily as a result of additional term loan borrowings in January 2016.

*2015 Compared to 2014.* Other expense, net decreased \$0.5 million, or 24.3%, in 2015 compared to 2014, primarily due to a decrease in realized and unrealized foreign currency transaction losses of \$0.4 million. Interest expense increased \$0.2 million in 2015 compared to 2014, primarily due to the term loan originated in June 2015.

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**Quarterly Results of Operations**

The following tables set forth unaudited quarterly statements of operations data for each of the eight quarters in the period ended December 31, 2016. The information for each of these quarters has been prepared on the same basis as the audited annual consolidated financial statements included elsewhere in this prospectus and, in the opinion of management, includes all adjustments, which consist only of normal recurring adjustments, necessary for the fair presentation of the results of operations for these periods. This data should be read in conjunction with our audited consolidated financial statements and related notes included elsewhere in this prospectus. These quarterly results are not necessarily indicative of our operating results to be expected for 2017 or for any future period.

	Three Months Ended							
	Mar. 31, 2015	Jun. 30, 2015	Sep. 30, 2015	Dec. 31, 2015	Mar. 31, 2016	Jun. 30, 2016	Sep. 30, 2016	Dec. 31, 2016
(in thousands)								
<b>Consolidated Statements of Operations Data:</b>								
Revenue:								
Subscriptions, software and support	\$ 10,887	\$ 13,161	\$ 13,922	\$ 15,237	\$ 15,618	\$ 17,321	\$ 17,668	\$ 19,365
Professional services	12,225	14,432	16,224	15,116	20,346	15,146	13,077	14,382
Total revenue	<u>23,112</u>	<u>27,593</u>	<u>30,146</u>	<u>30,353</u>	<u>35,964</u>	<u>32,467</u>	<u>30,745</u>	<u>33,747</u>
Cost of revenue:								
Subscriptions, software and support	1,214	1,490	1,732	1,643	1,782	1,836	1,890	1,929
Professional services	8,650	10,346	11,531	11,875	12,978	11,723	9,315	8,670
Total cost of revenue	<u>9,864</u>	<u>11,836</u>	<u>13,263</u>	<u>13,518</u>	<u>14,760</u>	<u>13,559</u>	<u>11,205</u>	<u>10,599</u>
Gross profit	13,248	15,757	16,883	16,835	21,204	18,908	19,540	23,148
Operating expenses:								
Sales and marketing	8,622	10,100	10,010	9,568	11,166	13,831	14,480	14,660
Research and development	3,694	3,967	4,698	4,391	4,927	5,296	6,702	6,069
General and administrative	3,146	3,061	3,256	3,052	3,930	4,318	4,531	4,260
Total operating expenses	<u>15,462</u>	<u>17,128</u>	<u>17,964</u>	<u>17,011</u>	<u>20,023</u>	<u>23,445</u>	<u>25,713</u>	<u>24,989</u>
Operating (loss) income	(2,214)	(1,371)	(1,081)	(176)	1,181	(4,537)	(6,173)	(1,841)
Other expense (income):								
Other expense, (income) net	1,083	(685)	669	512	(537)	733	(67)	1,663
Interest expense	—	—	74	114	242	241	243	256
Total other expense (income)	<u>1,083</u>	<u>(685)</u>	<u>743</u>	<u>626</u>	<u>(295)</u>	<u>974</u>	<u>176</u>	<u>1,919</u>
Net (loss) income before income taxes	(3,297)	(686)	(1,824)	(802)	1,476	(5,511)	(6,349)	(3,760)
Income tax (benefit) expense	(103)	509	(144)	116	721	(1,217)	(1,610)	423
Net (loss) income	<u>\$ (3,194)</u>	<u>\$ (1,195)</u>	<u>\$ (1,680)</u>	<u>\$ (918)</u>	<u>\$ 755</u>	<u>\$ (4,294)</u>	<u>\$ (4,739)</u>	<u>\$ (4,183)</u>

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	Three Months Ended							
	Mar. 31, 2015	Jun. 30, 2015	Sep. 30, 2015	Dec. 31, 2015	Mar. 31, 2016	Jun. 30, 2016	Sep. 30, 2016	Dec. 31, 2016
(as a percentage of total revenue)								
<b>Consolidated Statements of Operations Data:</b>								
Revenue:								
Subscriptions, software and support	47.1%	47.7%	46.2%	50.2%	43.4%	53.3%	57.5%	57.4%
Professional services	52.9	52.3	53.8	49.8	56.6	46.7	42.5	42.6
Total revenue	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Cost of revenue:								
Subscriptions, software and support	5.3	5.4	5.7	5.4	5.0	5.7	6.1	5.7
Professional services	37.4	37.5	38.3	39.1	36.1	36.1	30.3	25.7
Total cost of revenue	<u>42.7</u>	<u>42.9</u>	<u>44.0</u>	<u>44.5</u>	<u>41.1</u>	<u>41.8</u>	<u>36.4</u>	<u>31.4</u>
Gross margin	57.3	57.1	56.0	55.5	58.9	58.2	63.6	68.6
Operating expenses:								
Sales and marketing	37.3	36.6	33.2	31.5	31.0	42.6	47.1	43.4
Research and development	16.0	14.4	15.6	14.5	13.7	16.3	21.8	18.0
General and administrative	13.6	11.1	10.8	10.1	10.9	13.3	14.7	12.6
Total operating expenses	<u>66.9</u>	<u>62.1</u>	<u>59.6</u>	<u>56.1</u>	<u>55.6</u>	<u>72.2</u>	<u>83.6</u>	<u>74.0</u>
Operating (loss) income	(9.6)	(5.0)	(3.6)	(0.6)	3.3	(14.0)	(20.0)	(5.4)
Other expense (income):								
Other expense (income), net	4.7	(2.5)	2.2	1.7	(1.5)	2.3	(0.2)	4.9
Interest expense	—	—	0.2	0.4	0.7	0.7	0.8	0.8
Total other expense (income)	<u>4.7</u>	<u>(2.5)</u>	<u>2.4</u>	<u>2.1</u>	<u>(0.8)</u>	<u>3.0</u>	<u>0.6</u>	<u>5.7</u>
Net (loss) income before income taxes	(14.3)	(2.5)	(6.0)	(2.7)	4.1	(17.0)	(20.6)	(11.1)
Income tax (benefit) expense	(0.4)	1.8	(0.5)	0.4	2.0	(3.7)	(5.2)	1.3
Net (loss) income	<u>(13.9)%</u>	<u>(4.3)%</u>	<u>(5.5)%</u>	<u>(3.1)%</u>	<u>2.1%</u>	<u>(13.3)%</u>	<u>(15.4)%</u>	<u>(12.4)%</u>

### Quarterly Revenue Trend

Our quarterly subscriptions, software and support revenue increased sequentially for all periods presented due primarily to increases in the number of new customers and expanded relationships with existing customers. While professional services revenue increased on an annual basis, in some cases, revenue for professional services decreased period over period. The sequential decrease in professional services revenue for the three months ended June 30, 2016 reflected the completion of a substantial portion of a major government customer contract in the three months ended March 31, 2016. The sequential decrease in professional services revenue for the three months ended September 30, 2016 reflected the completion of additional work under that same customer contract in the three months ended June 30, 2016.

### Quarterly Cost and Expense Trend

The sequential decrease in cost of revenue for the three months ended June 30, 2016 reflected a decrease in contracted labor costs due to the completion of a substantial portion of a major customer contract in the three months ended March 31, 2016. The sequential decrease in cost of revenue for the three months ended September 30, 2016 and December 31, 2016 reflected a decrease in contracted labor costs due to the completion of additional work under the same major customer contract in the three months ended June 30, 2016. The sequential decrease in cost of revenue for the three months ended December 31, 2016 also reflected lower personnel costs due to bonus achievements in the prior quarter.

Sales and marketing, research and development, and general and administrative expenses generally have increased sequentially over the periods presented as we increased our headcount to support the continued investment in our platform and our growth. The sequential decrease in sales and marketing expense for the three

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months ended December 31, 2015 reflected lower commission payments. The sequential increase in research and development costs for the three months ended September 30, 2016 reflected an increase in personnel costs due to additional headcount, as well as the cost of a summer intern program. The sequential decrease in research and development costs for the three months ended December 31, 2016 reflected lower personnel costs due to bonus achievements in the prior quarter and lower facility and overhead costs. The sequential increase in general and administrative costs for the three months ended March 31, 2016 reflected increased compensation expense related to expected bonus achievement. The sequential decrease in general and administrative costs for the three months ended December 31, 2016 reflected lower personnel costs due to bonus achievements in the prior quarter.

The sequential increase in other expense, net for the three months ended December 31, 2016 reflected an increase in unrealized foreign currency transaction losses from the prior quarter.

### ***Seasonality***

We have historically experienced seasonality in terms of when we enter into agreements with customers. We typically enter into a significantly higher percentage of agreements with new customers, as well as renewal agreements with existing customers, in the fourth quarter and, to a lesser extent, the second quarter. The increase in customer agreements for the fourth quarter is attributable to large enterprise account buying patterns typical in the software industry. However, we recognize substantially all of our revenue ratably over the terms of our subscription agreements, which generally occurs over a one to five-year period. As a result, a substantial portion of the revenue that we report in each period will be derived from the recognition of deferred revenue relating to agreements entered into during previous periods. Consequently, a decline in new sales or renewals in any one period may not be immediately reflected in our revenue results for that period. This decline, however, will negatively affect our revenue in future periods. Accordingly, the effect of significant downturns in sales and market acceptance of our platform and potential changes in our rate of renewals may not be fully reflected in our results of operations until future periods.

### ***Backlog***

Backlog represents future amounts to be invoiced under subscription agreements. As of December 31, 2015 and 2016, we had backlog of approximately \$111 million and \$167 million, respectively. Less than half of our backlog as of December 31, 2016 is expected to be filled in 2017.

We often sign multiple-year subscription agreements. The timing of invoices to customers is a negotiated term and thus varies among our subscription agreements. For multiple-year agreements, it is common to invoice an initial quarterly or annual amount at contract signing followed by subsequent quarterly or annual invoices. At any point in the contract term, there can be amounts that we have not yet been contractually able to invoice. Until such time as we have the contractual right to invoice, these amounts are not recorded in deferred revenue or elsewhere in our consolidated financial statements, and are considered by us to be backlog.

We expect that the amount of backlog relative to the total value of our contracts will change from quarter to quarter and year to year for several reasons, including the amount invoiced early in the contract term, the specific timing and duration of large customer subscription agreements, varying invoicing cycles of subscription agreements, the specific timing of customer renewals, changes in customer financial circumstances and foreign currency fluctuations.

Backlog may also vary based on changes in the average non-cancellable term of subscription agreements. The change in backlog that results from changes in the average non-cancellable term of subscription agreements may not be an indicator of the likelihood of renewal or expected future revenue. Accordingly, we believe that fluctuations in backlog are not a reliable indicator of future revenue, and we do not utilize backlog as a key management metric internally.

## **Liquidity and Capital Resources**

As of December 31, 2016, we had \$31.1 million of cash and cash equivalents and \$10.0 million in available borrowings under our credit facilities. We raised our first and only outside primary equity financing of \$10.0 million in 2008. We believe that existing cash and cash equivalents, any positive cash flows from operations and available borrowings under our credit facilities will be sufficient to support working capital and capital expenditure requirements for at least the next 12 months. Since inception, we have financed operations primarily through sales of software and professional services, borrowings under our credit facilities, and to a lesser degree, the sale of equity securities. Our principal uses of cash are funding operations and capital expenditures. We can currently repatriate any cash held by our international subsidiaries without a tax impact.

### ***Sources of Funds***

#### *Line of Credit*

At December 31, 2015, we had a \$10.0 million revolving line of credit with a lender, expiring in June 2016, which was subsequently amended in June 2016 to extend the maturity date through June 2017. The amount of borrowing available under the credit facility at any time may not exceed 80% of eligible accounts receivable at such time and any amounts borrowed are collateralized by substantially all of our assets. Amounts drawn on the revolving line of credit bear interest at a floating rate of prime plus 0.75%. The agreement contains certain affirmative covenants related to the timely delivery of financial information to the bank and maintaining a liquidity ratio of at least 1.25 to 1, as well as certain customary negative covenants. We were in compliance with all covenants as of December 31, 2016, and would be able to draw up to a maximum of \$3.5 million on the revolving line of credit while maintaining compliance with the liquidity ratio. As of December 31, 2015 and 2016, there were no advances against the line of credit.

#### *Term Loan*

In March 2015, we entered into a collateralized \$10.0 million term loan facility with a lender, maturing in March 2019 and borrowed the full amount under the term loan facility in June 2015. In January 2016, we paid off the outstanding balance of the term loan and simultaneously entered into a \$20.0 million term loan facility with the lender, maturing in January 2020. We borrowed the full amount under the term loan facility in January 2016.

Interest on the term loan borrowings accrues at a floating rate equal to the prime rate plus 1.25%, which was 5.0% as of December 31, 2016. The first 12 months will be interest-only payments followed by 36 months of monthly amortization payments. We may pay off the entire term loan at any time by paying all outstanding principal, accrued interest, and a prepayment fee of 1% of the amount advanced through month 12, 0.5% during months 13 through 24 and no prepayment fee thereafter. The term loan includes a financial covenant related to our short-term liquidity. We were in compliance with this covenant as of December 31, 2016.

### ***Use of Funds***

Our principal uses of cash are funding operations and other working capital requirements. Over the past several years, revenue has increased significantly from year to year and, as a result, cash flows from customer collections have increased. However, operating expenses have also increased as we have invested in growing our business. Our operating cash requirements may increase in the future as we continue to invest in the strategic growth of our company.

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### **Cash and Cash Equivalents and Working Capital**

The following table summarizes our cash and cash equivalents and working capital, a GAAP measure defined as current assets minus current liabilities, as of December 31 (in thousands):

	<u>2015</u>	<u>2016</u>
Cash and cash equivalents	\$31,393	\$31,143
Working capital	19,463	12,365

Our cash and cash equivalents as of December 31, 2016 were available for working capital purposes. We do not enter into investments for trading purposes, and our investment policy is to invest any excess cash in short-term, highly liquid investments that limit the risk of principal loss; therefore, our cash is held in demand deposit accounts that generate very low returns.

We believe our existing cash and our future cash flows from operating activities will be sufficient to meet our anticipated cash needs for at least the next 12 months. Over the next twelve months, we expect our capital expenditure requirements to be approximately \$0.5 million to \$1.5 million. Our future capital requirements will depend on many factors, including our growth rate, the timing and extent of spending to support research and development efforts, the continued expansion of sales and marketing activities, the introduction of new functions and platform enhancements, and the continued market acceptance of our applications. To the extent existing cash and cash equivalents and investments and cash from operations are not sufficient to fund future activities, we may need to raise additional funds. We may seek to raise additional funds through equity, equity-linked or debt financings. If we raise additional funds through the incurrence of indebtedness, such indebtedness may have rights that are senior to holders of our equity securities and could contain covenants that restrict operations. Any additional equity financing may be dilutive to our existing stockholders. Although we are not currently a party to any agreement or letter of intent with respect to potential investments in, or acquisitions of, complementary businesses, services or technologies, we may enter into these types of arrangements in the future, which could also require us to seek additional equity financing, incur indebtedness, or use cash resources. We have no present understandings, commitments or agreements to enter into any such acquisitions.

### **Historical Cash Flows**

The following table shows a summary of our cash flows for the years ended December 31 (in thousands):

	<u>2014</u>	<u>2015</u>	<u>2016</u>
Net cash provided by (used in) operating activities	\$ 1,534	\$ (2,145)	\$ (7,756)
Net cash used in investing activities	(2,633)	(524)	(984)
Net cash provided by financing activities	\$16,367	\$10,000	\$ 10,000

### **Operating Activities**

For the year ended December 31, 2016, our net cash used in operating activities of \$7.8 million consisted of a net loss of \$12.5 million and \$0.2 million in adjustments for non-cash items, partially offset by \$4.9 million of cash provided by changes in working capital. Adjustments for non-cash items primarily consisted of a provision for deferred income taxes of \$1.1 million, partially offset by depreciation and amortization expense of \$0.8 million and a fair value adjustment for our warrant liability of \$0.2 million. The increase in cash and cash equivalents resulting from changes in working capital primarily consisted of an increase in deferred revenue of \$17.4 million as a result of increased subscription sales and a \$3.7 million increase in accrued compensation and related benefits as a result of our increasing headcount. These increases were partially offset by an \$11.2 million increase in accounts receivable, primarily due to the timing of billings and a higher level of sales, and a \$5.3 million increase in deferred commissions.

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For the year ended December 31, 2015, our net cash used in operating activities of \$2.1 million consisted of a net loss of \$7.0 million, partially offset by \$4.1 million of cash provided by changes in working capital and \$0.8 million in adjustments for non-cash items. Adjustments for non-cash items primarily consisted of depreciation and amortization expense of \$0.8 million and a fair value adjustment for our warrant liability of \$0.3 million, partially offset by a provision for deferred income taxes of \$0.3 million. The increase in cash and cash equivalents resulting from changes in working capital primarily consisted of an increase in deferred revenue of \$15.5 million as a result of increased subscription sales, partially offset by a \$6.6 million increase in accounts receivable, primarily due to the timing of billings and a higher level of sales, and a \$4.0 million increase in deferred commissions.

For the year ended December 31, 2014, our net cash provided by operating activities of \$1.5 million consisted of a net loss of \$17.1 million, offset by \$17.2 million of cash provided by changes in working capital and \$1.4 million in adjustments for non-cash items. Adjustments for non-cash items primarily consisted of depreciation and amortization expense of \$0.6 million, a fair value adjustment for our warrant liability of \$0.4 million, and a provision for deferred income taxes of \$0.4 million. The increase in cash and cash equivalents resulting from changes in working capital primarily consisted of an increase in deferred revenue of \$16.7 million as a result of increased subscription sales.

### *Investing Activities*

For the years ended December 31, 2014, 2015 and 2016, net cash used in investing activities was \$2.6 million, \$0.5 million and \$1.0 million, respectively, for the purchase of property and equipment.

### *Financing Activities*

For the year ended December 31, 2016, net cash provided by financing activities was \$10.0 million, consisting of \$20.0 million in net borrowings under our term loan, partially offset by \$10.0 million in repayments of debt.

For the year ended December 31, 2015, net cash provided by financing activities was \$10.0 million, consisting of \$10.0 million in net borrowings under our term loan.

For the year ended December 31, 2014, net cash provided by financing activities was \$16.4 million, consisting of \$37.4 million in net proceeds from the issuance of our Series B convertible preferred stock, partially offset by \$21.0 million in repurchases of our common stock from existing stockholders.

## **Contractual Obligations and Commitments**

The following table summarizes our commitments to settle contractual obligations at December 31, 2016 (in thousands):

	Payments Due By Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Debt:					
Principal payments	\$20,000	\$ 6,111	\$13,333	\$ 556	\$ —
Interest payments	1,463	785	675	3	—
Operating lease commitments	29,090	7,145	13,395	7,246	1,304
Purchase obligations <sup>(1)</sup>	1,650	330	660	660	—
Total contractual obligations	<u>\$52,203</u>	<u>\$ 14,371</u>	<u>\$28,063</u>	<u>\$ 8,465</u>	<u>\$ 1,304</u>

(1) We have annual royalty fees of \$0.3 million for a non-cancellable agreement for the use of technology that is integral in the development of our software. No amounts were included in the "More than 5 Years" column as this agreement is perpetual and will be required as long as we continue to use the technology.

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The commitment amounts in the table above are associated with contracts that are enforceable and legally binding and that specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions, and the approximate timing of the actions under the contracts. The table does not include obligations under agreements that we can cancel without a significant penalty.

### **Off-Balance Sheet Arrangements**

As of December 31, 2016, we did not have any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. We do not engage in off-balance sheet financing arrangements. In addition, we do not engage in trading activities involving non-exchange traded contracts. We therefore believe that we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in these relationships.

### **Critical Accounting Policies**

We believe that the following accounting policies involve a high degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of our operations. See note 2 to our consolidated financial statements appearing elsewhere in this prospectus for a description of our other significant accounting policies. The preparation of our consolidated financial statements in conformity with accounting principles generally accepted in the U.S. requires us to make estimates and judgments that affect the amounts reported in those financial statements and accompanying notes. Although we believe that the estimates we use are reasonable, due to the inherent uncertainty involved in making those estimates, actual results reported in future periods could differ from those estimates.

Significant estimates embedded in the consolidated financial statements for the period presented include revenue recognition, income taxes, stock-based compensation, and fair value measurements for our outstanding warrant.

#### ***Revenue Recognition***

We generate revenue primarily through sales of subscriptions to our platform, as well as professional services. We recognize revenue when all of the following conditions are met: (1) there is persuasive evidence of an arrangement; (2) the service or product has been provided to the customer; (3) the amount of fees to be paid by the customer is fixed or determinable; and (4) the collection of related fees is reasonably assured. If collection is not reasonably assured, we defer revenue recognition until collectability becomes reasonably assured. Our arrangements do not contain general rights of return.

#### ***Subscriptions, Software and Support Revenue***

Subscriptions, software and support revenue is primarily related to (1) SaaS subscriptions bundled with maintenance and support and hosting services and (2) term license subscriptions bundled with maintenance and support. To a lesser extent, we also generate revenue from the sale of perpetual software licenses and associated maintenance and support.

Historically, we licensed our software primarily under perpetual licenses, but over time we transitioned from perpetual licenses to subscriptions. As a result, revenue from our perpetual software licenses was 5.0%, 1.9%, and 0.9% of our total revenue for 2014, 2015, and 2016, respectively.

We generally sell our software on a per-user basis. We bill customers and collect payment for subscriptions to our platform in advance on an annual, quarterly or monthly basis. In certain instances, we have had customers pay their entire contract up front.

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### SaaS Subscriptions

Our SaaS subscription revenue is derived from customers accessing our cloud offering pursuant to contracts that are generally one to five years in length. We perform all required maintenance and support for our cloud offering and we do not separately charge customers for hosting costs. In these arrangements, our customers do not have the right to take the software on-premises and, as a result, such arrangements are not accounted for within the scope of the software revenue guidance. Revenue from SaaS subscriptions is recognized ratably over the term of the subscription, beginning with the date our service is made available to our customer.

### Term License Subscriptions

Our term license subscription revenue is derived from customers with on-premises installations of our platform pursuant to contracts that are generally one to five years in length. Customers with term license subscriptions have the right to use our software and receive maintenance and support. Since we do not sell maintenance and support separately from the subscription, revenue for the term license subscription and maintenance and support is recognized ratably over the term of the subscription, upon delivery of the platform to the customer when sold on a standalone basis.

### Perpetual Licenses

Our perpetual license revenue is derived from customers with perpetual licenses to our platform and associated maintenance and support contracts. We recognize revenue from perpetual licenses on the date of delivery to our customer. We sell maintenance and support to perpetual license customers separately from the perpetual licenses pursuant to agreements that generally renew annually. Maintenance and support revenue is deferred and recognized ratably over the term of the support period.

### *Professional Services*

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance and training related to our platform. Our professional services are not essential to the functionality of our platform because the platform is ready for the customer's use immediately upon delivery and is not modified or customized in any manner.

Consulting services are billed under both time-and-material and fixed-fee arrangements. For standalone time-and-material contracts, we recognize revenue at contractually agreed upon billing rates applied to hours performed, plus the cost of any materials delivered. For standalone fixed-fee contracts, we also recognize revenue as the work is performed using the proportional performance method of accounting. Training revenue is recognized when the associated training services are delivered. Training is also sold in the form of a subscription arrangement where a customer agrees to pay an annual fixed fee for a fixed number of users to have access to all of our training offerings during the year. Revenue from training subscription agreements is recognized ratably over the subscription period.

We defer recognition of revenue from work performed on pending contract modifications until the period in which the modifications are accepted and funding is approved by the customer. Costs of work performed on pending contract modifications are expensed as incurred.

### *Multiple Element Arrangements*

Our multiple element arrangements are from SaaS subscriptions, term license subscriptions, and perpetual licenses that are generally sold in combination with maintenance and support service and frequently with professional services.

### **SaaS Subscriptions**

For multiple element arrangements involving SaaS subscriptions that include professional services in addition to the subscription to our platform, we evaluate each element to determine whether it represents a separate unit of accounting. Because there are third-party vendors who routinely sell and provide the same professional services to our customers, our professional services are deemed to have standalone value apart from the SaaS subscription. Additionally, we offer both SaaS subscriptions and professional services on a standalone basis. Professional services revenue is therefore accounted for separately from subscription fees and recognized as the professional services are performed. We allocate revenue to the elements based on the selling price hierarchy using vendor-specific objective evidence, or VSOE, of selling price, third-party evidence, or TPE, of selling price, or if neither exists, best estimated selling price, or BEBP. In cases where we do not have VSOE or TPE of the elements of our arrangements, we use BEBP to allocate revenue. We determine BEBP for a service by considering multiple factors including, but not limited to, evaluating the weighted average of actual sales prices and other factors such as gross margin objectives, pricing practices and growth strategy. Pricing practices taken into consideration include historic contractually stated prices, volume discounts where applicable and our price lists. While we believe we can make reliable estimates regarding these matters, these estimates are inherently subjective. Once the revenue is allocated to these elements, revenue is recognized as such services are provided.

### **Term License Subscriptions**

For multiple element arrangements involving term license subscriptions, maintenance and support and professional services, we do not have VSOE of fair value for the maintenance and support. Our term license subscriptions are generally not sold on a standalone basis, and therefore, we have not established VSOE of fair value for the subscriptions. Consequently, for our bundled arrangements that include certain professional services, there are two undelivered elements for which VSOE of fair value has not been established and, therefore, we utilize the combined services approach and defer all revenue until the software has been delivered and the provision of all services has commenced. We then recognize the entire fee from the arrangement ratably over the remaining period of the arrangement, assuming all other software revenue recognition criteria have been met.

### **Perpetual Licenses**

For multiple element arrangements involving our perpetual software licenses, we allocate revenue to the software license arrangement by determining if VSOE of fair value exists for the undelivered elements, which are usually maintenance and support and professional services. In situations where VSOE of fair value exists for the undelivered elements, we apply the residual method whereby the fees allocated to license revenue are recognized upon delivery, the fees allocated to maintenance and support revenue are recognized over the service period and the fees allocated to professional services and training are recognized as performed. In instances where we lack VSOE of fair value for the undelivered elements, revenue is either deferred until the final element is delivered or recognized ratably over the service period when the only undelivered elements are either professional services or maintenance and support. We have VSOE for maintenance and support elements and professional services elements performed on a time and materials basis. VSOE of fair value is based upon the price charged when the same element is sold separately. In determining VSOE of fair value, we require that a substantial majority of the selling prices fall within a reasonably narrow pricing range. We reassess VSOE annually or more frequently if required.

### **Deferred Commissions**

Deferred commissions are the incremental costs that are directly associated with subscription agreements with customers and consist of sales commissions paid to our direct sales force. Commissions are considered direct and incremental and as such are deferred and amortized over the terms of the related customer contracts consistent with the related revenue. As of December 31, 2015 and 2016, we had total deferred commissions of \$12.7 million and \$18.0 million, respectively. Commission expense was \$3.8 million, \$4.6 million, and \$6.5 million for the years ended December 31, 2014, 2015 and 2016, respectively.

## Stock-Based Compensation

We account for stock-based compensation expense related to stock-based awards based on the estimated fair value of the award on the grant date. We calculate the fair value of stock options using the Black-Scholes option pricing model. For service-based awards, stock-based compensation expense is recognized on a straight-line basis over the requisite service period. For performance-based awards, stock-based compensation expense is recognized using the accelerated attribution method, based on the probability of satisfying the performance condition. For awards that contain market conditions, compensation expense is measured using a Monte Carlo simulation model and recognized using the accelerated attribution method over the derived service period based on the expected market performance as of the grant date.

All of our currently outstanding awards require the satisfaction of both a service condition and a liquidity event condition. The liquidity condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or the effective date of our initial public offering. No compensation expense will be recognized until the performance condition is achieved, at which time the cumulative compensation expense using the accelerated attribution method from the service start date will be recognized.

We estimate the fair value of stock options using the Black-Scholes option pricing model, which requires the use of subjective assumptions, including the expected term of the option, the current price of the underlying stock, the expected stock price volatility, expected dividend yield and the risk-free interest rate for the expected term of the option. The expected term represents the period of time the stock options are expected to be outstanding. Due to the lack of sufficient historical exercise data to provide a reasonable basis upon which to otherwise estimate the expected term of the stock options, we use the simplified method to estimate the expected term for its stock options. Under the simplified method, the expected term of an option is presumed to be the mid-point between the vesting date and the end of the contractual term. Expected volatility is based on historical volatilities for publicly traded stock of comparable companies over the estimated expected term of the stock options. We assume no dividend yield because dividends on our common stock are not expected to be paid in the near future, which is consistent with our history of not paying dividends on our common stock.

The following table summarizes the assumptions used to estimate the fair value of stock options granted during the years ended December 31:

	2014	2015	2016
Risk-free interest rate	1.8% - 2.1%	1.7% - 1.9%	1.3% - 1.5%
Expected term (in years)	6.5	6.5	6.5
Expected volatility	44.7% - 46.0%	39.7% - 44.4%	40.9% - 42.0%
Expected dividend yield	0%	0%	0%

As discussed in “— Recent Accounting Pronouncements,” we have elected to early adopt Accounting Standards Update No. 2016-09, which, among other things, permits an entity to make an entity-wide policy election to either (1) estimate the number of awards that are expected to vest or (2) account for forfeitures when they occur. We have elected to account for forfeitures as they occur, rather than estimate expected forfeitures.

We will continue to use judgment in evaluating the assumptions related to our stock-based compensation on a prospective basis. As we continue to accumulate additional data related to our common stock, we may have refinements to our estimates, which could materially impact our future stock-based compensation expense.

Based upon an assumed initial public offering price of \$            per share, the midpoint of the range set forth on the cover of this prospectus, the aggregate intrinsic value of outstanding options to purchase shares of our common stock as of December 31, 2016 was \$            million, all of which related to unvested options.

*Common Stock Valuations*

We are required to estimate the fair value of the common stock underlying our stock option awards when performing the fair value calculations with the Black-Scholes option-pricing model. The fair value of the common stock underlying our stock option awards was determined by our board of directors, with input from management and review of third-party valuations. All stock options granted have an exercise price per share not less than the per share fair value of our common stock underlying those options on the date of grant. We believe that our board of directors has the relevant experience and expertise to determine the fair value of our common stock. In the absence of a public trading market, our board of directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of our common stock for financial reporting purposes as of the grant date of each stock option award, including the following factors:

- contemporaneous valuations performed by unrelated third-party valuation firms;
- the prices, rights, preferences and privileges of our preferred stock relative to those of our common stock;
- the lack of marketability of our common stock;
- our actual operating and financial performance;
- current business conditions and projections;
- hiring of key personnel and the experience of our management;
- our history and the timing of the introduction of new applications and capabilities;
- our stage of development;
- the likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition of our business given prevailing market conditions;
- the market performance of comparable publicly traded companies; and
- U.S. and global capital market conditions.

As described above, the exercise price of our stock option awards was determined by our board of directors, in part, based on the most recent third-party valuation as of the grant date. The valuations of our common stock were determined in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. In valuing our common stock, we determined the equity value of our business generally using a weighting of the market comparable approach and the income approach valuation methods.

The market comparable approach estimates the fair value based on a comparison of our company to comparable public companies in a similar line of business. Based on trading multiples of the comparable companies, a representative market value multiple is determined which is applied to our historical and projected operating results to estimate the value of our company. The estimated value is then discounted by a non-marketability factor due to the fact that stockholders of private companies do not have access to trading markets similar to those used by stockholders of public companies, which impacts liquidity. We review the comparable companies with each valuation to ensure that the companies continue to best reflect our industry and business model.

The income approach estimates value based on the expectation of future cash flows that a company will generate, such as cash earnings, cost savings, tax deductions and the proceeds from disposition. These future cash flows are discounted to their present values using a discount rate derived based on an analysis of the cost of capital of comparable publicly traded companies in similar lines of business, as of each valuation date, and is adjusted to reflect the risks inherent in our cash flows.

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Once an equity value was determined, we utilized a hybrid of the option pricing method, or OPM, and probability-weighted expected return method, or PWERM, to allocate the overall value of equity to the various share classes.

The OPM treats common stock and convertible preferred stock as call options on a business, with exercise prices based on the liquidation preference of the convertible preferred stock. The OPM uses the Black-Scholes option model to price the call option. Estimates of the volatility applied in the Black-Scholes option model were based on available information on the volatility of common stock of comparable, publicly traded companies. Additionally, we applied a discount for lack of marketability.

The PWERM relies on a forward-looking analysis to predict the possible future value of a company. Under this method, discrete future outcomes, including an initial public offering, or IPO, and non-IPO scenarios, are weighted based on the estimated probability of each scenario. The PWERM is used when discrete future outcomes can be predicted with reasonable certainty based on a probability distribution.

The hybrid method is generally preferred for a company expecting a liquidity event in the near future but where, due to market or other factors, the liquidity event is uncertain. In the application of the hybrid method, we relied on the PWERM to allocate the value of equity under a near-term liquidity scenario and the OPM to allocate the value of equity under a long-term liquidity scenario. The projected equity value relied upon in the PWERM scenario was based on (1) guideline IPO transactions involving companies that were considered broadly comparable to us and (2) our expectation of the pre-money valuation that we needed to achieve to consider an IPO as a viable exit strategy. The projected equity value relied upon in the OPM was based on a weighted average indication of the value using the discounted cash flow method, which is an income approach, and the guideline public company method, which is a market approach.

Application of these approaches involves the use of estimates, judgment and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses and future cash flows, discount rates, market multiples, the selection of comparable companies and the probability of possible future events. Changes in any or all of these estimates and assumptions or the relationships between those assumptions impact our valuations as of each valuation date and may have a material impact on the valuation of our common stock.

We have not historically incurred stock-based compensation expense as all outstanding options to purchase common stock do not become exercisable, assuming other vesting conditions are satisfied, until either a change of control transaction or an initial public offering of our common stock. In connection with the completion of this offering, we will incur a material one-time stock-based compensation expense due to the performance condition associated with our stock options becoming probable. If the performance condition had occurred on December 31, 2016, we would have recorded an estimated \$4.8 million of stock-based compensation expense related to these options.

The following table summarizes by grant date the number of shares of common stock subject to stock options granted from January 1, 2016 through the date of this prospectus, as well as the associated per share exercise price and the estimated fair value per share of our common stock on the grant date.

<u>Grant Date</u>	<u>Number of Shares Underlying Options Granted</u>	<u>Exercise Price per Share</u>	<u>Fair Value per Share</u>
April 8, 2016	175,100	\$ 7.50	\$ 7.50
April 28, 2016	13,100	7.50	7.50
July 20, 2016	2,086,580	9.46	9.46
November 1, 2016	100,300	9.46	8.70
January 31, 2017	249,700	11.17	11.17

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For valuations after the completion of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant.

### **Income Taxes**

We use the asset and liability method of accounting for income taxes in which deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases. We measure deferred tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed. We recognize the effect on deferred tax assets and liabilities of a change in tax rates as income and expense in the period that includes the enactment date. A valuation allowance is established if it is more likely than not that all or a portion of the deferred tax asset will not be realized.

Our tax positions are subject to income tax audits by multiple tax jurisdictions throughout the world. We recognize the tax benefit of an uncertain tax position only if it is more likely than not the position is sustainable upon examination by the taxing authority. We measure the tax benefit recognized as the largest amount of benefit which is more likely than not to be realized upon settlement with the taxing authority. We recognize penalties and interest related to unrecognized tax benefits as income tax expense.

We calculate the current and deferred income tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years and record adjustments based on filed income tax returns when identified. The amount of income taxes paid is subject to examination by U.S. federal, state and foreign tax authorities. The estimate of the potential outcome of any uncertain tax issue is subject to our assessment of relevant risks, facts and circumstances existing at that time. To the extent the assessment of such tax position changes, we record the change in estimate in the period in which we make that determination.

Due to changing economic and political environments in the United States and abroad, we may be impacted by possible tax reform or similar changes in tax law. Specifically, certain proposed changes in the United States may impact the U.S. taxation of our foreign earnings and adversely impact our effective tax rate. However, it is not possible to estimate the impact of such changes at this time and we continue to monitor these changes.

### **Emerging Growth Company Status**

In April 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this extended transition period and, as a result, we will not adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

### **Recent Accounting Pronouncements**

#### *Adopted*

In August 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2014-15, Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern, or ASU 2014-15, which amends ASC Subtopic 205-40 to provide guidance about management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide

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related disclosures. Specifically, the amendments (1) provide a definition of the term “substantial doubt,” (2) require an evaluation of every reporting period, (3) provide principles for considering the mitigating effect of management’s plans, (4) require certain disclosures when substantial doubt is alleviated as a result of consideration of management’s plans, (5) require an express statement and other disclosures when substantial doubt is not alleviated and (6) require an assessment for a period of one year after the date that financial statements are issued. ASU 2014-15 was effective for our year ended December 31, 2016, and its adoption did not have a material impact on our financial condition, results of operations or cash flows.

In April 2015, the FASB issued ASU No. 2015-03, Simplifying the Presentation of Debt Issuance Costs, or ASU 2015-03, which simplifies the presentation of debt issuance costs by requiring that such costs be presented in the consolidated balance sheets as a direct deduction from the carrying value of the associated debt instrument, consistent with debt discounts. Subsequent to the issuance of ASU 2015-03, the SEC staff announced that the presentation of debt issuance costs associated with line-of-credit arrangements may be presented as an asset. This announcement was codified by the FASB in ASU No. 2015-15. These ASUs were effective for our year ended December 31, 2016, and their adoption did not have a material impact on our financial condition, results of operations or cash flows.

In April 2015, the FASB issued ASU No. 2015-05, Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement, or ASU 2015-05, which provides clarification on whether a cloud computing arrangement includes a software license. If a software license is included, the customer should account for the license consistent with its accounting for other software licenses. If a software license is not included, the arrangement should be accounted for as a service contract. ASU 2015-05 was effective for our year ended December 31, 2016, and its adoption did not have a material impact on our financial condition, results of operations or cash flows.

In November 2015, the FASB issued ASU No. 2015-17, Balance Sheet Classification of Deferred Taxes (Topic 740), or ASU 2015-17, which requires that all deferred tax assets and liabilities, including any related valuation allowance, be classified as noncurrent on the balance sheet. We elected to early adopt ASU 2015-17 beginning with our year ended December 31, 2015. The adoption of ASU 2015-17 did not have a material impact on our financial condition, results of operations or cash flows.

In March 2016, the FASB issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting (Topic 718), or ASU 2016-09, which is intended to simplify several aspects of the accounting for stock-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. We elected to early adopt ASU 2016-09 beginning with our year ended December 31, 2016, and have applied the guidance retrospectively. The adoption of ASU 2016-09 did not have a material impact on our financial condition, results of operations or cash flows.

### ***Not Yet Adopted***

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), or ASU 2014-09, which provides new guidance for revenue recognition. ASU 2014-09 provides that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 also requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. Entities have the option of using either a full retrospective or modified retrospective approach for the adoption of the standard. In March 2016, the FASB issued ASU No. 2016-08, Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net), or ASU 2016-08, which clarifies implementation guidance on principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU No. 2016-10, Identifying Performance Obligations and Licensing, or ASU 2016-10, which clarifies the identification of performance obligations and the licensing implementation

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guidance in ASU 2014-09. In addition, in May 2016, the FASB issued ASU No. 2016-12, Narrow-Scope Improvements and Practical Expedients, or ASU 2016-12, which clarifies the guidance on assessing collectibility, presentation of sales taxes, noncash consideration and completed contracts and contract modifications at transition. For public entities, the new standard is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. For all other entities, the new standard is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods beginning after December 15, 2019. We intend to avail ourselves of Section 107 of the JOBS Act that permits us to defer adoption until January 1, 2019. We are currently evaluating the impact the adoption of these standards will have on our consolidated financial statements.

We currently plan to adopt the new standard using the full retrospective approach; however, the decision regarding the adoption method has not been finalized. Our final determination will depend on a number of factors such as the significance of the impact of the new standard on our financial results, system readiness, including that of software procured from third-party providers, and our ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements, as necessary.

We are in the initial stages of our evaluation of the impact of the new standard on our accounting policies, processes, and system requirements. We have assigned internal resources in addition to the engagement of third-party service providers to assist in the evaluation. Furthermore, we have made and will continue to make investments in systems to enable timely and accurate reporting under the new standard. While we continue to assess all potential impacts under the new standard there is the potential for significant impacts to the timing of recognition of revenue, particularly term license subscriptions and professional services revenue. We also expect an impact to our accounting for contract acquisition costs, both with respect to the amounts that will be capitalized as well as the period of amortization.

Under current industry-specific software revenue recognition guidance, we have historically concluded that we did not have VSOE of fair value of the undelivered services related to term license subscriptions, and accordingly, have recognized term license subscriptions and related services ratably over the subscription term. Professional services included in an arrangement with subscription revenue has also been recognized ratably over the subscription term. The new standard, which does not retain the concept of VSOE, requires an evaluation of whether term license subscriptions and related services, including professional services, are distinct performance obligations and therefore should be separately recognized at a point in time or over time. Depending on the outcome of our evaluation, the timing of when revenue is recognized could change significantly for term license subscriptions and professional services under the new standard.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), or ASU 2016-02, which requires that lessees recognize assets and liabilities for leases with lease terms greater than 12 months in the statement of financial position. ASU 2016-02 also requires improved disclosures to help users of financial statements better understand the amount, timing and uncertainty of cash flows arising from leases. The update is effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted. We are currently evaluating the impact the adoption of ASU 2016-02 will have on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments, or ASU 2016-15, which aims to reduce the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. ASU 2016-15 will require adoption on a retrospective basis unless it is impracticable to apply, in which case we would be required to apply the amendments prospectively as of the earliest date practicable. ASU 2016-15 is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted. We are currently in the process of evaluating the impact of adoption of this standard on our consolidated financial statements.

## **Qualitative and Quantitative Disclosures about Market Risk**

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates.

### ***Interest Rate Risk***

We had cash and cash equivalents of \$31.1 million as of December 31, 2016, which consisted of cash in readily available checking accounts and overnight repurchase investments. These securities are not dependent on interest rate fluctuations that may cause the principal amount of these assets to fluctuate. At December 31, 2016, we also had in place a \$10.0 million revolving line of credit expiring June 2017, which was undrawn, and a \$20.0 million term loan maturing January 2020. The line of credit bears interest at a floating rate of prime plus 0.75%. The term loan bears interest at a floating rate of prime plus 1.25%, or 5.00% as of December 31, 2016. A hypothetical 10% change in interest rates would not result in a material impact on our consolidated financial statements.

### ***Foreign Currency Exchange Risk***

Our reporting currency is the U.S. dollar. Due to our international operations, we have foreign currency risks related to revenue and operating expenses denominated in currencies other than the U.S. dollar, primarily the British Pound Sterling, Euro, Australian Dollar and Swiss Franc. Our sales contracts are primarily denominated in the local currency of the customer making the purchase. In addition, a portion of operating expenses are incurred outside the United States and are denominated in foreign currencies. Decreases in the relative value of the U.S. dollar to other currencies may negatively affect revenue and other operating results as expressed in U.S. dollars. We do not believe that an immediate 10% increase or decrease in the relative value of the U.S. dollar to other currencies would have a material effect on operating results.

We have experienced and will continue to experience fluctuations in net loss as a result of transaction gains or losses related to remeasuring certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. We have not engaged in the hedging of foreign currency transactions to date, although we may choose to do so in the future.

## LETTER FROM MATT CALKINS

Appian aims to help every company to be a software company.

Software is complicated: our mission is to make it simple. We reduce complexity for our customers at every step in the software cycle, from developing to deploying to using. We're obsessed with simplicity, and everything at Appian is as simple as it can be, down to the lobby and the business cards. Building powerful software is naturally complex, but simplicity is the core of our value proposition.

We generated about \$475,000 per customer last year, on average, a ratio that suggests great possibilities as we expand our client base.

We benefit from three trends driving enterprise IT today:

- Digital Transformation encourages every company to be more agile and responsive through the use of bespoke software. Appian is a leading way to make that software.
- There's a growing gap between the worldwide demand for software (rising sharply) and the supply of people capable of making it (relatively flat). Low-code platforms, like Appian, can accelerate developer speed by six to 20 times, according to use cases cited in a Forrester report.
- CIOs today are faced with custom application sprawl that is dividing their data assets, exposing security vulnerabilities and consuming their budgets. Appian offers a way to consolidate dozens or even hundreds of applications into a single secure environment.

We're known as a low-code platform because we facilitate building an application with little or no coding. Our edge in this fast-growing market is that we provide both speed and power: with Appian, sophisticated applications can be built and deployed in just weeks. Our client base trusts Appian with some of their most essential processes. Nearly 10% of our subscription customers spent more than \$1 million per year on our software in 2016.

Our customers are extremely loyal. Approximately 95% of our subscription customers have historically renewed every year, often at higher levels. As we unify applications, data and users inside our environment, a network effect obtains, strengthening our value proposition as we grow. At the same time, we create economies of scale by making every component of our applications into a reusable object. Between rising marginal value and falling marginal cost, it's clear why we retain so many customers.

### CULTURE

Culturally, Appian is further from other companies than it appears.

At first glance you might notice a few differences: we've been around a long time, we've grown with very little money, we push the edges of recognized market boundaries and we have a long-serving team of founders and executives. The differences go deeper than this.

Most companies are run for the present and for the capital partners; Appian has been run for the future and for the customers. We consider our positive externalities (our good influences on external constituents) the best measurement of the value we've created.

We build and invest for the long run. I used to interview every new employee, and I still do all the interviews I can. It's one of the best ways to ensure that the culture remains aligned to my vision. I hire talented altruists with a history of success. Appian employees are remarkable people. Our culture is both competitive and supportive, full of mutual respect and nearly free of internal politics.

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I love how we challenge every idea. Appian was founded by competitive debaters, and we've made debate into a company tradition. Every proposal is challenged: good ones get better, bad ones are exposed. Everyone can be heard, but there's a single decision-maker for every topic, and when we make a decision, we do it decisively.

We've built a great company with very little funding. I used to tell my team there is "no such thing as a fat predator" — meaning that only the lean and hungry can thrive at the top of the food chain. We grew the hard way, but we're stronger for it. Our happy customers became our best (and most affordable) marketing. We learned to 'spend' creativity and hard work, forever the world's best currencies, in lieu of cash.

Appian is a great place to work, and our employees are loyal. Our executive team averages 10 years with the firm. The Washington Post has named us a best workplace each of the last three years.

We're proud users of our own software, with more than 50 Appian applications deployed across the company.

I'm one of four founders at Appian, along with Mike Beckley, Bob Kramer, and Marc Wilson. We were friends before we went into business, and we're still friends today, working together. We still argue over every decision, as sharply and frankly as ever.

### **EVERY TIME**

I design strategy board games, and I play them competitively.

I love that games make you start from zero, every time. You begin a game completely equal to your opponents, no matter what happened in the past. In life, one advantage leads to another, and a few years in a corner office can mislead you into thinking you know better. In a game, you have to earn it every time.

I want Appian to have this 'every time' mentality, forever. The best idea can come from anywhere, and our next leaders can be anyone.

Appian's mission is to reduce the cost of making and using new software. If we succeed, we'll help companies become more differentiated, personal, and efficient than they are today.

## BUSINESS

### Overview

Appian provides a leading low-code software development platform as a service that enables organizations to rapidly develop powerful and unique applications. The applications created on our platform help companies drive digital transformation and competitive differentiation.

With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface with little or no coding required. Our customers have used applications built on our low-code platform to launch new business lines, automate vital employee workflows, manage complex trading platforms, accelerate drug development and build global procurement systems. With our platform, decision makers can reimagine their products, services, processes and customer interactions by removing much of the complexity and many of the challenges associated with traditional approaches to software development.

Organizations across industries are digitally transforming—leveraging software to automate and optimize mission critical operations, enhance customer experiences and drive competitive differentiation. Historically, organizations have principally relied on packaged software and custom software solutions to operationalize and automate their businesses. Packaged software often fails to address unusual use cases or to enable differentiation and requires organizations to conform their individual processes, needs and systems of record to standardized frameworks. While traditional custom software solutions can be differentiated and tailored to meet strategic objectives, development requires a long, iterative and cumbersome process, as well as costly integration, and relies on scarce developer talent.

We enable organizations to differentiate themselves from their competition through software-enabled digital transformation. Our low-code platform employs an intuitive, visual interface and pre-built development modules that reduce the time required to build powerful and unique applications. We believe that developing applications on our platform can be as simple as drawing a picture. Our platform automates the creation of forms, data flows, records, reports and other software elements that would otherwise need to be manually coded or configured. This functionality greatly reduces the iterative development process, allowing for real-time application optimization and ultimately shortening the time from idea to deployment. Further, our patented Self-Assembling Interface Layer, or SAIL, technology ensures that applications developed on our platform can be immediately and natively deployed across a full range of mobile and desktop devices with no additional customization, including desktop web browsers, tablets and mobile phones. Updates to applications developed with SAIL disseminate automatically across device types to ensure that all users benefit from the most up-to-date functionality. At the same time, we unify enterprise data in a single searchable environment, providing organizations with a comprehensive view of customer, product, organizational asset and other critical information. Rich reporting dashboards capture detailed performance metrics, providing valuable business intelligence and analytics that enable business process optimization. Moreover, our platform can be deployed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases.

Our go-to-market strategy consists of both direct sales and, to a lesser extent, sales through strategic partners. We sell our software almost exclusively through subscriptions and intend to grow our revenue both by adding new customers and increasing the number of users at existing customers that use applications developed on our platform. As of December 31, 2016, we had 280 customers in a wide variety of industries, of which 225 customers were commercial and 55 customers were government or non-commercial entities. Our customers include financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation organizations. As of December 31, 2016, 32% of our commercial customers were Global 2000 organizations, and included 37 Fortune 500 companies, six of the largest 25 global financial services firms by 2016 revenue and eight of the 30 largest global healthcare companies by 2016 revenue. We determined relevant global financial services and healthcare companies by referencing certain independent industry data from S&P

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Global Market Intelligence. Customers receive all of the modules and functionality of our platform with their initial subscription, which facilitates the seamless creation of new applications. Many of our customers begin by building a single application and grow to build dozens of applications on our platform, which implicitly reduces the per-user cost of each application. Generally, the development of new applications results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we charge subscription fees on a per-user basis for the significant majority of our customer contracts. Every additional application that an organization creates on our platform increases the value of our platform for that organization because it further integrates people, process and data across the organization and facilitates knowledge sharing. At the same time, our industry-leading professional services organization enables our customers to more easily build and deploy applications on our platform to achieve their digital transformation goals.

We believe that we have a significant market opportunity in helping organizations accelerate their digital transformation by leveraging our low-code software development platform. Our current core software markets, which include the markets for low-code development platforms, case management software, business process management and platform-as-a-service, are expected to represent a combined \$24.0 billion market opportunity in 2017 and a combined \$40.0 billion market opportunity in the near term. In addition to our current core software markets, we believe that our platform better meets certain of the needs that have been historically addressed by manually-developed custom enterprise software, which represented a \$149 billion market in 2016. Further, based on the total number of global companies and government institutions in 2016 in relevant industries and our industry-specific average annual recurring revenue for customers as of December 31, 2016, we internally estimate our market opportunity to be approximately \$35 billion in 2016. See “—Our Opportunity” for additional information.

We have experienced strong revenue growth, with revenue of \$89.0 million, \$111.2 million and \$132.9 million in 2014, 2015 and 2016, respectively. Our subscription revenue was \$22.8 million, \$41.5 million and \$60.0 million in 2014, 2015 and 2016, respectively, representing year-over-year growth rates of 82% from 2014 to 2015 and 45% from 2015 to 2016. Our professional services revenue was \$51.9 million, \$58.0 million and \$63.0 million in 2014, 2015 and 2016, respectively. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue.

We have invested, and intend to continue to invest, in developing our platform, expanding our sales and marketing and research and development capabilities, and providing general and administrative resources to support our growth. As a result, we incurred net losses of \$17.1 million, \$7.0 million and \$12.5 million in 2014, 2015 and 2016, respectively. We also had operating cash flows of \$1.5 million, \$(2.1) million and \$(7.8) million in 2014, 2015 and 2016, respectively.

### **Industry Background**

**Software-enabled digital transformation.** Organizations across industries are digitally transforming—leveraging software to automate and optimize mission critical operations, enhance customer experiences and drive competitive differentiation. Software has revolutionized mass transportation, drug development, business-customer interactions and operational management. Software has evolved from being a method for modernization to an opportunity for differentiation. Several key trends are fueling software-enabled digital transformation, including the rise of cloud computing and the Internet of Things and the proliferation of mobile devices. Decision makers are increasingly recognizing the need to capitalize on these trends, with 87% of Global 2000 executives planning digital transformation projects for 2017 and 47% of Global 2000 executives citing digital transformation as their highest corporate priority for 2017, according to a survey conducted by LTM Research, an industry research firm, which was commissioned by us.

**Challenges to effective digital transformation.** Historically, organizations have principally relied on packaged software and custom software solutions to operationalize and automate their businesses. However, these solutions are challenged in their ability to facilitate effective software-enabled digital transformation. More specifically:

- **Packaged software is inadequate.** Packaged software, whether delivered in the cloud or on-premises, is a one-size-fits-all solution that performs industry-agnostic functions, such as customer relationship management or enterprise resource management, or serves specific industry verticals without organization-specific differentiation. Organizations are often unable to use packaged software to address unusual use cases and differentiate themselves and must conform their individual processes, needs and systems of record to standardized frameworks. Moreover, for both cross-industry and industry-specific software, the limited scope of functionality often forces organizations to adopt numerous point solutions that can be difficult to integrate.
- **Traditional custom software solutions are expensive and difficult to create.** In contrast, traditional custom solutions are built to address particular organization-specific use cases. Although this allows organizations to better manage their operations and differentiate their businesses, traditional custom software solutions have historically been hampered by several limitations:
  - Traditional application development is a long and cumbersome process, requiring complex coding and an iterative feedback cycle. According to one example cited by Forrester Research Inc., or Forrester, the coding of custom software took an estimated 2.7 years to complete, and therefore the output from a development project may not meet user needs and intentions even on the first day of deployment. In the same report, Forrester found that the use of low-code software development was six to 20 times faster than traditional software development. Further, traditional custom software projects require on-going maintenance and enhancement, without which the resulting software will not keep pace with future needs.
  - The proliferation in mobile devices and the competition among mobile device manufacturers means that device operating systems are continuously being updated, modified and customized for specific hardware configurations. This continual change means that traditional custom software needs to be updated continuously in order to remain relevant across an organization's entire technology environment. Updating such custom software so that it can be used across devices adds another layer of complexity to the entire process.
  - The need for organizations to manage their operations utilizing all of these devices and environments necessitates costly integrations in an attempt to avoid creating information silos. Otherwise, organizations could not effectively share information across applications and processes, which would inhibit collaboration, effective analytics and real-time decision making.
  - Developer talent is scarce and hiring developers to create custom software is costly. According to an LTM Research survey of Global 2000 executives, which was commissioned by us, 79% of respondents said they were concerned that their digital transformation initiatives would be impacted by challenges in hiring and retaining skilled developers. Software developer costs can be greater than \$100,000 per year, depending on location. Given its labor intensive nature, traditional custom software can be very expensive to design, implement and maintain.

Low-code software development platforms have emerged to address the limitations associated with packaged software and traditional custom software solutions. These low-code solutions seek to enable both professional software developers and business users to rapidly build organization-specific applications. However, many existing low-code platforms are either limited in functionality such that they do not support the development of enterprise-grade applications or continue to require significant manual coding, and therefore are not truly "low-code."

## Benefits of Our Platform

We enable organizations to differentiate themselves from their competition through software-enabled digital transformation. With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface, with little or no coding required. Our patented SAIL technology ensures that applications developed on our platform can be immediately and natively deployed across a full range of mobile and desktop devices with no additional customization, including desktop web browsers, tablets and mobile phones. We also enable organizations to easily modify and enhance applications and automatically disseminate these updates across device types to ensure that all users benefit from the most up-to-date functionality.

Key benefits of our platform include:

- **Rapid and simple innovation through our powerful platform.** Our low-code platform employs an intuitive, visual interface and pre-built development modules that reduce the time required to build powerful and unique applications. Our platform automates the creation of forms, data flows, records, reports and other software elements that would otherwise need to be manually coded or configured. This functionality greatly reduces the iterative development process, allowing for real-time application optimization and ultimately shortening the time from idea to deployment. In turn, organizations can better leverage scarce and costly developer talent to accomplish more digital transformation objectives.
- **Powerful applications to solve complex challenges.** At the core of our platform is an advanced engine that enables the modeling, modification and management of complex processes and business rules. Our heritage as a business process management, or BPM, company provides us with this differentiated understanding of complex processes, and we have incorporated that expertise into our platform to enable the development of powerful applications. Organizations have used our platform to launch new business lines, build large procurement systems, manage retail store layouts, conduct predictive maintenance on field equipment and manage trading platforms, among a range of other use cases. For example, the Defense Information Systems Agency utilizes our platform to manage its large and complex procurement organization, having processed nearly \$3.5 billion worth of contract value on our platform since 2009.
- **Create once, deploy everywhere.** Our patented SAIL technology allows developers to create an application once and deploy it everywhere with the consistency of experience and optimal performance levels that users expect. Applications developed on our platform can be immediately and natively deployed across a full range of mobile and desktop devices with no additional customization, including desktop web browsers, tablets and mobile phones.
- **Seamless integration with existing systems and data.** In contrast to typical enterprise software, our platform does not require that data reside within it in order to enable robust data analysis and cross-department and cross-application insight. Our platform seamlessly integrates with many of the most popular enterprise software applications and data repositories and can be used within many legacy environments. For example, organizations frequently use our platform to extend the life and enhance the functionality of legacy systems of record, such as those used for enterprise resource planning, human capital management and customer relationship management, by building new applications that enhance the functionality of those systems and by leveraging the data within those systems to further optimize and automate operations.
- **Deployment flexibility to serve customer needs.** Our platform can be installed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases. Our flexible deployment model also preserves a seamless path to future cloud deployments for organizations initially choosing on-premises or hybrid approaches for their most sensitive workloads.
- **Industry-leading security.** Our platform is designed to meet the highest demands of our federal government and large enterprise customers. Our cloud platform holds some of the highest security

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certifications from government agencies and industry organizations, including being one of the first low-code software companies to achieve Federal Risk and Authorization Management Program, or FedRAMP, compliance. Our platform also meets the Payment Card Industry Data Security Standard, or PCI DSS, and the United States Health Insurance Portability and Accountability Act standard.

Our approach to digital transformation goes beyond simply enabling organizations to build custom applications fast. We empower decision makers to reimagine their products, services, processes and customer interactions with software by removing much of the complexity and many of the challenges associated with traditional approaches to software development. Because we make application development easy, organizations can build specific and competitively differentiated functionality into applications to deliver enhanced user experiences and streamlined business operations. This competitive differentiation is of utmost importance as 59% of enterprise IT respondents cited the desire to gain required functionality as the main motivation for developing custom enterprise software, which is not available in purchased packaged software, according to a 2014 study conducted by Forrester Consulting, which was commissioned by us.

### **Our Growth Strategy**

Key elements of our growth strategy include:

- **Expand our customer base.** As of December 31, 2016, we had 280 customers in a wide variety of industries, including financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation. We believe that the market for our software development platform is in its early stages and that we have a significant opportunity to add additional large enterprise and government customers.
- **Grow through our differentiated land and expand model.** Customers receive all of the modules and functionality of our platform with their initial subscription, which facilitates the seamless creation of new applications. Many of our customers begin by building a single application and grow to build dozens of applications on our platform, which implicitly reduces the per-user cost of each application. Generally, the development of new applications results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we usually charge subscription fees on a per-user basis. Every additional application that an organization creates on our platform increases the value of our platform for that organization because it further integrates people, process and data across the organization and facilitates knowledge sharing. Applications built on our platform may be used only on our platform while customers have active subscriptions, creating substantial switching costs for customers to move to a different software platform. We believe that organizations will develop additional applications and add users to our platform as they continue to recognize these benefits.
- **Grow revenue from key industry verticals.** While our platform is industry-agnostic, we have recently made, and plan to continue to make, investments to enhance the expertise of our sales and marketing organization within our key industry verticals of financial services, healthcare and U.S. federal government. In 2016, we generated over 65% of our subscription revenue from customers in these verticals. We believe that focusing on the digital transformation needs of organizations within these industry verticals can help drive adoption of our platform.
- **Continue to innovate and enhance our platform.** We have made, and will continue to make, investments in research and development to strengthen our platform and expand the number of features available to our customers. We typically offer multiple upgrades each year that allow our customers to benefit from ongoing innovation. Most recently, we expanded our offering to include Quick Apps, which enables non-professional developers to develop native web and mobile applications in minutes with no coding. In addition, our platform allows our customers to embed artificial intelligence, or AI, concepts into their business processes and to use our pre-built integrations to leading providers of AI services. Our platform also incorporates best practices in the field of data science into a tool for our customers to automate the

training, deployment and management of AI predictive models. We are also collaborating with other companies to include cognitive computing and Robotic Process Automation capabilities on our platform, allowing the delivery of even more powerful and intelligent applications using an agile delivery capability. As we continue to increase the functionality of our platform and further reduce the amount of developer skill that is required to build robust applications on our platform, we believe that we have the potential to expand the use of our platform.

- **Expand our international footprint.** Our platform is designed to be natively multi-lingual to facilitate collaboration and address challenges in multi-national organizations. In 2016, approximately 20% of our total revenue was generated from customers outside of the United States. Today, we operate in 11 countries and believe that we have a significant opportunity to grow our international footprint. We are investing in new geographies, including through investment in direct and indirect sales channels, professional services and customer support and implementation partners.
- **Grow our partner base.** We have several strategic partnerships including with Deloitte, KPMG and PricewaterhouseCoopers. These partners work with organizations that are undergoing digital transformation projects and are therefore able to refer potential customers to us. When these partners recognize an opportunity for our platform, they often introduce us to potential customers. We intend to further grow our base of partners to provide broader customer coverage and solution delivery capabilities.

## Our Opportunity

We believe that we have a significant market opportunity in helping organizations accelerate their digital transformation by leveraging our low-code software development platform.

- **Current core software markets.** We believe that our platform addresses several key core software markets, as follows:
  - **Low-code.** According to Forrester, the market for low-code development platforms is expected to total \$3.9 billion in 2017 and is expected to grow at a 59% compound annual growth rate to \$15.5 billion in 2020. We were included as a “Leader” in the Forrester Wave: Low-Code Development Platforms in 2016, which is an evaluation of current offering, strategy and market presence.
  - **Case management.** Case management applications are designed to support complex processes that require a combination of human workflows and collaboration, electronic workflows, data management and processing of files and cases. According to Aite, the market for case management software is expected to total \$1.3 billion in 2017 and is expected to grow at a 9% compound annual growth rate to \$1.6 billion in 2019. We were included as a “Leader” based on the strength of our current offering, our strategy and our market presence in the Forrester Wave: Dynamic Case Management in 2016.
  - **BPM.** BPM applications are designed to support the optimization of business processes, including process identification, improvement implementation, and monitoring and analysis. According to IDC, the market for BPM software is expected to total \$4.4 billion in 2017 and is expected to grow at a 4% compound annual growth rate to \$5.0 billion in 2020. We were included as a “Leader” based on our ability to execute and the completeness of our vision in the Gartner Intelligent Business Process Management Suites Magic Quadrant in 2016.
  - **Application PaaS.** Application platform as a service, or application PaaS, is a cloud service that provides the necessary infrastructure to enable the development, deployment and hosting of software applications. We believe that we are well positioned to capture a portion of the application platform-as-a-service, or application PaaS, market, which IDC estimates to reach \$14.4 billion in 2017, and which is expected to grow at an 8% compound annual growth rate to \$18.0 billion in 2020.

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Taken together, these current core software markets are expected to represent a combined \$24.0 billion market opportunity in 2017 and a combined \$40.0 billion market opportunity in the near term.

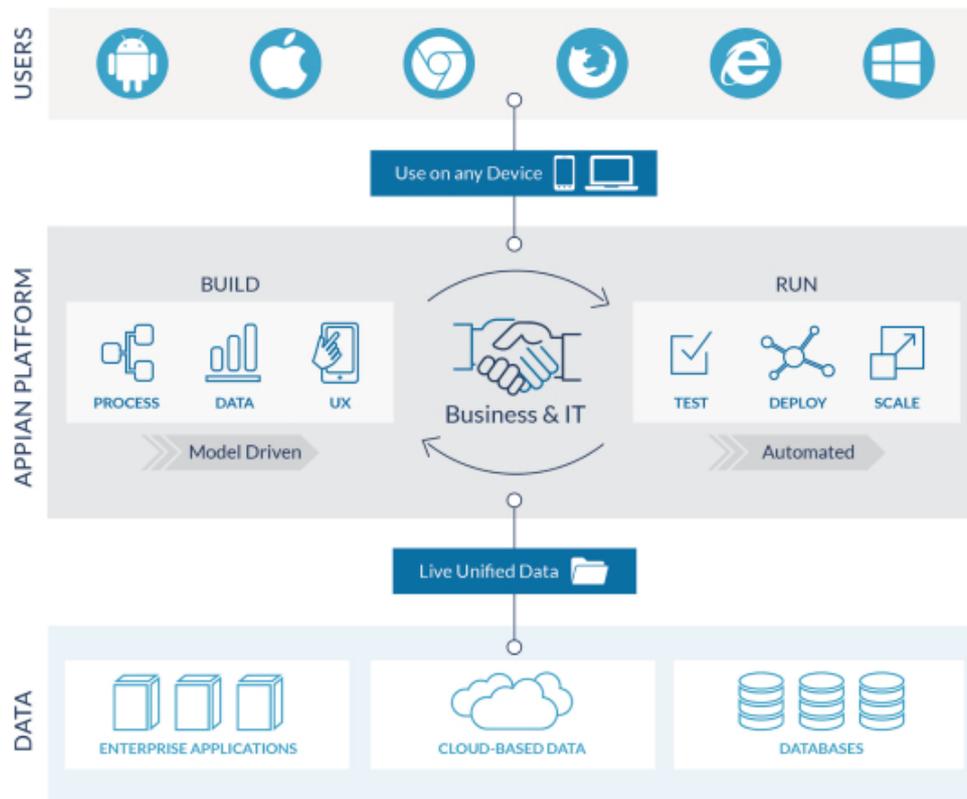
- **Traditional custom enterprise software market.** In addition to our current core software markets, we believe that our platform better meets certain of the needs that have been historically addressed by manually-developed custom enterprise software, which is expected to represent a \$148 billion market in 2017, according to Forrester.
- **Our internal estimate.** Based on the total number of global companies and government institutions in 2016 in relevant industries and revenue-based size segments, and our industry- and size-specific average annual recurring revenue for customers as of December 31, 2016, we internally estimate our market opportunity to have been approximately \$29 billion in 2016. We determined relevant global companies and government institutions by industry and size by referencing certain independent industry data from S&P Global Market Intelligence. We calculated industry- and size-specific average annual recurring revenue as of December 31, 2016 by adding the aggregate annual recurring revenue from all existing customers within each industry and size segment and dividing the total by the number of our existing customers in each industry and size segment.

### **Our Platform**

With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface, with little or no coding required. We also enable organizations to easily modify and enhance applications and automatically disseminate these updates across device types to ensure that all users benefit from the most up-to-date functionality. Through the speed and power of our platform, organizations can make their digital transformations happen more effectively and efficiently than could be achieved through building an application with Java or other standard programming languages. We believe that developing applications can be as simple as drawing a picture.

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At the core of our platform is an advanced engine that enables the modeling, modification and management of complex processes and business rules. Our heritage as a BPM company provides us with this differentiated understanding of complex processes, and we have incorporated that expertise into our platform to enable the development of powerful applications. The following graphic shows our architecture:



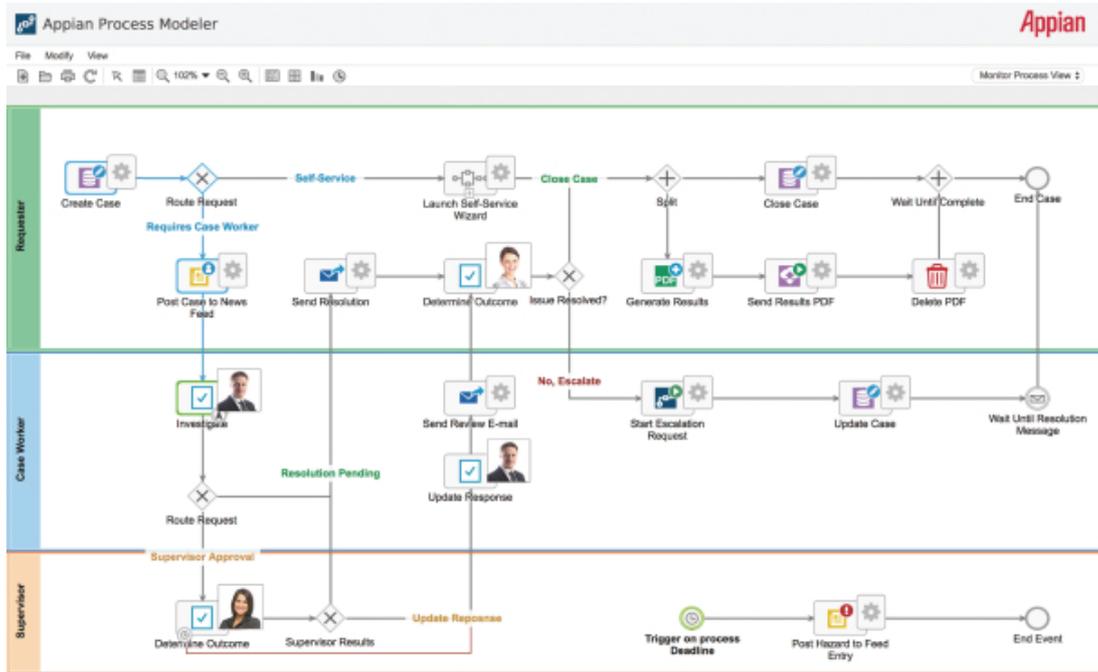
We believe that the key elements of our technology infrastructure are as follows:

### **Web-Based Development Environment**

The Appian design interface is a model-driven, web-based development environment for application creation, testing, deployment and performance optimization. Appian design is a shared repository of all Appian components—interfaces, process models, APIs, new component builders and user collaboration modules—and administration utilities for managing people, processes and data.

The Appian design repository incorporates best practices and years of lessons learned from digital transformation initiatives. Common development operations tasks require just a few clicks and can be automated for hands-off deployment. Dramatic improvements in developer productivity can be achieved through user-friendly capabilities such as fast impact analysis of all changes; auto-updating applications and components when data types change; and live views of interfaces under development.

Appian design guides developers through the necessary steps to create the foundation elements of reusable interfaces, records and business processes, while providing all the power that developers need to design, build and implement enterprise systems at scale. The following graphic shows our process modeler.



Organizations have used our platform to launch new business lines, build large procurement systems, manage retail store layouts, conduct predictive maintenance on field equipment and manage trading platforms, among a range of other use cases. For example, the Defense Information Systems Agency utilizes our platform to manage its large and complex procurement organization, having processed over 150,000 contract negotiation correspondences and nearly \$3.5 billion worth of contract value on our platform since 2009.

***Our patented SAIL technology***

SAIL is our patented technology that allows developers to create dynamic and responsive web and native-mobile user interfaces through a “create once, deploy everywhere” architecture. SAIL interfaces only need to be created once and SAIL automatically assembles customer applications for optimal viewing on each device type, including desktop web browsers, tablets and mobile phones, and each device operating system, including iOS and different permutations of Android. SAIL leverages native functionality inherent across a myriad of devices and operating systems to ensure the consistency of experience and optimal performance levels that users expect. Updates to applications developed with SAIL are automatically disseminated across device types to ensure that all users benefit from the most up-to-date functionality. This approach enables enterprise mobility without the extensive time and resources that other development approaches require. The following graphic shows how our end-user interface appears across different devices.



We believe that SAIL provides a significant advantage over other platforms that both require extensive customization for various devices at the time of the creation of the new applications and on an on-going basis as mobile device manufacturers continue to update their software and capabilities. Further, in regulated industries, each traditional custom software application must generally undergo its own security assessment and accreditation process, while applications created with SAIL are designed to be compliant with stringent security and numerous rigorous regulatory requirements.

### ***Unified Data***

Appian Records is an advanced data management technology that allows end users to discover and unite enterprise data into a single searchable environment, providing a comprehensive view of an organization’s data. In contrast to typical enterprise software, our platform does not require that data reside within it in order to enable robust data analysis and cross-department and cross-application insight. Using standard database software and service connection frameworks, including APIs, our platform seamlessly integrates with many of the most popular enterprise software applications and data repositories and can be used within many legacy environments. Users simply need to assign a name to a given topic and then decide which existing data sources within the enterprise they want to capture. Users can categorize important information by business topic, not just by where that information resides, thereby allowing organizations to unify their data and their processes and effectively access information buried in existing systems. For example, a Record for “Customer A” might bring together data from customer relationship management, accounting and customer support systems to give users a complete view of the customer in their organization. In addition to the benefits of having an immediate snapshot of all centralized data relating to the customer, product, employee or service request. Records also allows organizations to analyze the end-to-end journeys of any given person, entity or asset. Once the connections are established, users may navigate, analyze, collaborate and take action on data from our intuitive dashboards and interactive reports.

### ***Unified End User Interfaces***

Our end user interfaces enable end users to discover data, collaborate with other end users and participate in process actions. The end user experience begins with a news feed that allows end users to monitor key events from processes, systems and other end users, providing a unified view of all applications and activity in one place. End users can collaborate with others, obtain status updates, send direct and secure messages and create social tasks for other end users. Our activity stream is designed to be intuitive for end users familiar with popular consumer social interfaces, allowing them to instantly track important events and occurrences and collaborate with little to no training. We also enforce company security policies, so end users can confidently collaborate without fear of compromising regulatory compliance. Our end user interfaces solve the problem of information silos, allowing organizations to respond to constituent feedback in real time by uniting the right team with the right information.

At the same time, our platform provides transparency, visibility and control across all of our applications through a dynamic and powerfully flexible tasking environment. We provide detailed tracking of all human process tasks on our platform, including when tasks have been assigned, addressed and completed by any user. Business Activity Monitoring reports display real-time enterprise performance, bottleneck detection and process optimization while scaling to millions of tasks.

### ***Deployment Flexibility In the Cloud or On-Premises***

Our platform can be deployed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases. Our flexible deployment model also enables organizations not yet ready to move their most sensitive workloads to the cloud to deploy our platform in an on-premises or hybrid manner while preserving a path to potential future cloud deployments.

### **Technology**

We designed our platform to support large global enterprises and government organizations at scale, in the cloud, on-premises and through a hybrid or private cloud approach. We designed, deploy and manage our platform with the goal of it being a “joy to use” for both developers and users of applications.

Our customers build powerful and unique applications using our proprietary and patented SAIL technology, which we also use ourselves to develop features of our platform. We also employ cutting-edge React technology for building web and mobile user interfaces. We use third-party proprietary database and database language technology licensed from Kx Systems, Inc., or Kx, to power the high-performance in-memory database of our platform. Under our agreement with Kx, we are permitted to distribute Kx’s software as a component part of our software platform as well as to host Kx’s software on behalf of our customers through our cloud offering. Our agreement requires Kx to provide maintenance directly to us on the software we license as long as it provides maintenance to any other customers. We pay a variable license fee based on the number of applications built by our customers, subject to an overall cap on payment. We have paid Kx the overall license fee cap in each of the last five years. We may maintain the contract as long as we pay maintenance fees. Kx may terminate the agreement if we materially breach the agreement, become insolvent, make an assignment for the benefit of creditors, or if a bankruptcy proceeding is initiated against us. Unless we fail to pay amounts due under the contract or violate certain of Kx’s intellectual property rights, Kx may not terminate the agreement until either it has successfully litigated a breach action or six months, whichever is earlier.

Our cloud offering is hosted by Amazon Web Services and is available in more than 20 availability zones in eight countries. Data in our cloud offering is written simultaneously to multiple availability zones to protect against loss of customer data.

Our platform can be deployed in the cloud, on-premises or using a hybrid approach, with organizations able to access the same functionality and data sources in all cases. Further, customers choosing to install our platform on-premises or using a hybrid approach can do so in a flexible manner. We have also implemented a wide set of technical, physical and personnel-based security controls designed to protect against the compromise of confidential data that belongs to both our customers and us.

### **Professional Services**

Since inception, we have invested in our professional services organization to help ensure that customers are able to deploy and adopt our platform. More recently, we have expanded our professional services partner network to further support our customers. We believe our investment in professional services, as well as efforts by partners to build their practices around Appian, will drive increased adoption of our platform.

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When we first acquire a new customer, our professional services experts or our deployment partners' professional services experts start the implementation process, which typically takes several weeks. Delivery specialists facilitate deployment of our platform and training personnel provide comprehensive support throughout the implementation process. Customers have access to our Appian Academy, which caters to a diverse range of skill sets and roles within organizations and trains developers on our platform. We also provide instructor-led courses at our Reston, Virginia headquarters and certain of our other offices, as well as virtual classrooms for self-paced learning and on-site training at our customers' offices.

Once our customers have deployed and implemented our platform, our Appian Architects review our customers' programs and applications to find potential issues and provide recommendations on best practice. Our professional services team also assists customers by building applications on our platform for them.

Over time, we expect professional services revenue as a percentage of total revenue to decline as we increasingly rely on strategic partners to help our customers deploy our software.

### **Customer Support**

Our customer support personnel are trained engineers and designers who can work with customers on the front lines to address support issues. We provide email and phone support, with teams in the United States, United Kingdom and Australia. Developers can also find answers to their questions on the Appian Forum, a community site that provides online customer support; real-time collaboration and networking; a growing knowledge base of answers for common questions; and live product webinars and training. The Appian Forum also includes documentation, methodologies and reusable components for our platform. We have consistently been able to achieve at least a 98% customer satisfaction rating for our customer support organization, based on our surveys.

**Our Customers**

Our customers operate in a variety of industries, including financial services, government, education, technology, media and telecom, consumer, healthcare and industrials. As of December 31, 2016, we had 280 customers in a wide variety of industries, of which 225 customers were commercial and 55 customers were government or non-commercial entities. Our customers include financial services, healthcare, government, telecommunications, media, energy, manufacturing and transportation organizations. Our number of customers paying us in excess of \$1 million of annual recurring revenue has grown from one at the end of 2012 to three, six, 11 and 19 at the end of 2013, 2014, 2015 and 2016, respectively. As of December 31, 2016, 32% of our commercial customers were Global 2000 organizations, and included 37 Fortune 500 companies, six of the largest 25 global financial services firms by 2016 revenue and eight of the 30 largest global healthcare companies by 2016 revenue. Generally, our sales force targets its efforts to organizations with over 1,000 employees and \$1 billion in annual revenue. No single end-customer accounted for more than 10% of our total revenue in 2015 or 2016. The Defense Information Systems Agency accounted for 10.7% of our total revenue in 2014 and no other single end-customer accounted for more than 10% of total revenue in that year. Some of our representative customers by sector include the following:



**Customer Case Studies**

**Dallas/Fort Worth International Airport**

*Situation:* Dallas/Fort Worth International Airport, or DFW, is the world’s eighth largest airport in terms of traffic, and has a facility covering roughly 27 square miles. Prior to Appian, DFW mainly used paper-based processes, requiring the physical transportation of forms and files across the sprawling facility. Given its size, DFW needed a more efficient and reliable way to manage its back office operations.

*Solution:* DFW used Appian to build 18 applications in the initial six months following launch that focused on the automation of manual business processes. These processes support the daily operations of Human Resources, Finance and Information Technology functions. Appian can be accessed on mobile devices so that department heads can approve everything from pay raises to promotions from anywhere in the world. Transactions being performed electronically are rapidly approaching 100,000. DFW chose cloud delivery to accelerate the development and deployment of its digital solutions.

## **Sprint**

*Situation:* Sprint is a communications services company that creates more and better ways to connect its customers to the things they care about most. Sprint serves nearly 60 million connections, and is widely recognized for developing, engineering and deploying innovative technologies, including the first wireless 4G service from a national carrier in the United States; leading no-contract brands including Virgin Mobile USA, Boost Mobile, and Assurance Wireless; instant national and international push-to-talk capabilities; and a global Tier 1 Internet backbone. Sprint's wireline network supports its sales representatives and solutions engineers who sell, design, implement and support wireline solutions providing telephony and internet services to Sprint's commercial and public-sector business customers. Through Sprint's efforts to modernize its wireline product portfolio and add data services the company chose Appian for its initiative to significantly streamline and improve its wireline IT infrastructure –a key component of Sprint's overall \$2.5 billion cost reduction strategy.

*Solution:* Appian enabled Sprint to decommission hundreds of applications, removed mainframes and turn down two data centers resulting in added data services and a tremendous cost savings for the company. Remaining applications perform bespoke functions, with Appian providing the connective layer that guides the Sprint user community through all of those components. Using the intuitive interface and powerful data management and presentation capability, Appian has simplified and accelerated the process of selling and delivering solutions to Sprint's business customer base. Process improvements also greatly increased Sprint's ability to pre-qualify customers for wireline services.

## **University of South Florida System**

*Situation:* Serving nearly 48,000 students every year, the University of South Florida System, or USF, is a high-impact, global research system dedicated to student success. USF seeks to prepare students for life in a global environment. Creating the best student experience, and giving students modern tools to manage their educational journey, are both core elements of USF's mission.

*Solution:* Using Appian, USF's information technology department has been working with academic and business leadership to transform experiences for students, faculty and staff. The Archivum program, based on Appian, was piloted in the USF College of Public Health to enable full development and management of a student's course of study, and management of the student/academic advisor relationship on a mobile device. The solution was deployed in three weeks and reduced a two-week process to two days. Realizing Appian's potential for transformation, Archivum has been extended to eight operational areas in 17 months, including course records, medical student lottery, travel and human resource onboarding.

## **Ryder System**

*Situation:* Ryder System, a leader in commercial truck rentals and leasing, had numerous legacy systems and paper-based business processes that they endeavored to improve through automation as a cornerstone to a larger business and technology based transformation. The intent of the project was to improve the operational effectiveness of the business unit, improve the overall customer satisfaction as well as capture meaningful business insights and information from the transformed business process.

*Solution:* Utilizing Appian, Ryder unified these disparate systems and processes through the creation of multiple interconnected web and mobile applications. The Rental Signature Capture mobile app designed with Appian's software encompasses formerly paper-driven processes within the rental cycle, including yard check, which includes processes such as verifying which vehicles are in the yard and their condition and mileage, along with customer vehicle check-out and check-in, and signatures. The solution is accessible via tablet, yielding a faster and more transparent paperless experience. Ryder also developed an Accident Claims application that mobilizes all damage claims reporting, including damage photos, escalations, records of incidents and end-to-end process management. As a result, Ryder has experienced a 50% reduction in rental transaction times (reducing violations of its 20 minutes or less checkout guarantee to less than 1%), and a 10% improvement in satisfaction scores since deploying Appian.

## **Culture and Employees**

We believe that fostering our distinct culture of innovation is an important contributor to our success as a company. When we started Appian, we used to debate about everything. It was second nature since half the founding team had been competitive debaters in college. Debate proved to be a great way to reach the best decisions. Bad ideas couldn't survive; good ideas got better. We encourage everyone to speak up, but we also delegate every decision to a single person. So we can disagree, and we still reach firm resolutions.

We strive to hire the most talented individuals, from top universities and from industry, with an eye towards intelligence, passion and personal generosity. We place those individuals within small, agile teams to maximize their autonomy, creativity and collaboration. That may be why we've been named a top workplace by The Washington Post for three years running.

We started the business as a bootstrap, in the midst of a venture capital boom. We did it because we believe in self-reliance. Paying for our own expenses has made us stronger. A commitment to financial self-sufficiency is woven into our DNA.

Appian is an open, transparent, and data-rich environment because we run Appian on Appian software. We have about 50 applications internal to Appian that run on Appian including everything from cloud operations to pipeline management to free-food alerts. As our own best customer, we get to know our platform deeply, and we can improve it faster.

Our culture was purposefully created by our four founders, who are still heavily involved in operating the business, including recruiting, interviewing and educating all new employees at Appian. Our founders, led by Matt Calkins, our Chief Executive Officer, have intentionally grown our business organically, focusing on developing a single solution—the Appian platform. We do so employing a unified development team located in a single office in the Washington, D.C. metropolitan area to maximize the cohesion and simplicity of our platform and our company. When a client buys Appian software, they get a piece of Appian culture along with it.

As of December 31, 2016, we had 720 full-time employees, including 32 in customer support, 238 in sales and marketing, 146 in research and development and 86 in general and administrative. As of December 31, 2016, we had 605 full-time employees in the United States and 115 full-time employees internationally. During 2016, we had a voluntary attrition rate of 10% among all employees of our company. We believe that this low voluntary attrition rate is a testament to our company culture. None of our U.S. employees are covered by collective bargaining agreements. We believe our employee relations are good and we have not experienced any work stoppages.

## **Our Competition**

Our main competitors fall into three categories: (1) providers of low-code development platforms, such as salesforce.com and ServiceNow; (2) providers of business process management and case management software, such as IBM, OpenText, Oracle, Pegasystems and SAP; and (3) providers of custom software and customer software solutions that address, or are developed to address, some of the use cases that can be addressed by applications developed on our platform.

As our market grows, we expect that it will attract more highly specialized vendors as well as larger vendors that may continue to acquire or bundle their products more effectively. The principal competitive factors in our market include:

- platform features, reliability, performance and effectiveness;
- ease of use and speed;
- platform extensibility and ability to integrate with other technology infrastructures;

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- deployment flexibility;
- robustness of professional services and customer support;
- price and total cost of ownership;
- strength of platform security and adherence to industry standards and certifications;
- strength of sales and marketing efforts; and
- brand awareness and reputation.

We believe we generally compete favorably with our competitors with respect to the features and performance of our platform, the ease of integration of our applications and the relatively low total cost of ownership of our applications. However, many of our competitors have substantially greater financial, technical and other resources, greater name recognition, larger sales and marketing budgets, broader distribution, more diversified product lines and larger and more mature intellectual property portfolios.

### **Sales and Marketing**

#### ***Sales***

Our sales organization is responsible for account acquisition and overall market development, which includes the management of the relationships with our customers. While our platform is industry-agnostic, we have recently made, and plan to continue to make, investments to enhance the expertise of our sales organization within our core industry verticals of financial services, healthcare and government. We also expect to continue to grow our sales headcount in all of our principal markets and expand our presence into countries where we currently do not have a direct sales presence.

#### ***Marketing***

Our marketing efforts focus on building our brand reputation and increasing market awareness of our platform. Marketing activities include sponsorship of, and attendance at, trade shows and conferences; our annual Appian World event; social media and advertising programs; management of our corporate web site and partner portal; press outreach; and customer relations.

### **Research and Development**

Our engineering department is responsible for design, development, testing and release of our platform. Our engineering team closely coordinates with our executive management, which is responsible for creating a vision for our platform, and with our professional services and sales teams, which relay customer demands and possible new use cases or enhancements. Our development efforts focus on the critical areas of our platform, including infrastructure, ease-of-use and flexibility, end-user experience and ability to integrate with other enterprise systems. Research and development expense totaled \$13.5 million, \$16.8 million and \$23.0 million for 2014, 2015 and 2016, respectively.

### **Intellectual Property**

Our success depends in part upon our ability to protect our core technology and intellectual property. We rely on patents, trademarks, copyrights and trade secret laws, confidentiality procedures, and employee disclosure and invention assignment agreements to protect our intellectual property rights.

As of December 31, 2016, we had one issued patent relating to our SAIL technology and two patent applications pending in the United States relating to our platform. Our issued patent expires in 2034. We cannot assure you whether any of our patent applications will result in the issuance of a patent or whether the

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examination process will require us to narrow our claims. Any patents that may issue may be contested, circumvented, found unenforceable or invalidated, and we may not be able to prevent third parties from infringing them. We also license software from third parties for integration into our products, including open source software and other software available on commercially reasonable terms.

We control access to and use of our proprietary software and other confidential information through the use of internal and external controls, including contractual protections with employees, contractors, end-customers and partners, and our software is protected by U.S. and international copyright and trade secret laws. Despite our efforts to protect our trade secrets and proprietary rights through intellectual property rights, licenses, and confidentiality agreements, unauthorized parties may still copy or otherwise obtain and use our software and technology. In addition, we intend to expand our international operations, and effective patent, copyright, trademark, and trade secret protection may not be available or may be limited in foreign countries.

### **Facilities**

We have offices in three U.S. cities and 10 cities outside the United States. Our headquarters are located in Reston, Virginia. We believe that our current facilities are adequate to meet our ongoing needs, and that, if we require additional space, we will be able to obtain additional facilities on commercially reasonable terms.

### **Legal Proceedings**

From time to time we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management time and resources and other factors.

## MANAGEMENT

### Executive Officers, Key Employees and Directors

The following table sets forth certain information with respect to our executive officers, key employees and directors, including their ages as of December 31, 2016:

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
<b>Executive Officers</b>		
Matthew Calkins	43	Chief Executive Officer, President, Founder and Chairman of the Board
Robert C. Kramer	42	General Manager, Founder and Director
Mark Lynch	53	Chief Financial Officer
Edward Hughes	65	Senior Vice President, Worldwide Sales
Christopher Winters	44	General Counsel
<b>Key Employees</b>		
Marc Wilson	42	Founder and Senior Vice President, Global Partners & Industry
Michael Beckley	42	Chief Technology Officer, Chief Customer Officer and Founder
Suvajit Gupta	49	Senior Vice President, Engineering
Kevin Spurway	45	Senior Vice President, Marketing
Myles Weber	39	Chief Information Officer
Lang Ly	42	Vice President, Strategy
<b>Non-Employee Directors</b>		
A.G.W. "Jack" Biddle, III	55	Director
Prashanth "PV" Boccassam	48	Director
Michael G. Devine	64	Director
Barbara "Bobbie" Kilberg	72	Director
Michael J. Mulligan	65	Director

#### **Executive Officers**

*Matthew Calkins* is a Founder of Appian and has served as our Chief Executive Officer, President and as Chairman of our board of directors since August 1999. He also served as a director of MicroStrategy, Inc., a publicly held provider of enterprise software platforms, from November 2004 to April 2014. Mr. Calkins holds a B.A. in Economics from Dartmouth College. Our board of directors believes that Mr. Calkins's business expertise and his daily insight into corporate matters as our Chief Executive Officer, as well as his experience as a member of the board of directors of a public company, qualify him to serve on our board of directors.

*Robert C. Kramer* is a Founder of Appian and has served as our General Manager since January 2013 and as a member of our board of directors since 2008. Mr. Kramer served as our Chief Financial Officer from our founding to October 2008 and as our Vice President, Technology from October 2008 to December 2012. Mr. Kramer holds a B.S. in Economics from the Wharton School of the University of Pennsylvania. Our board of directors believes that Mr. Kramer's business expertise and his insight into corporate matters as our General Manager qualify him to serve on our board of directors.

*Mark Lynch* has served as our Chief Financial Officer since October 2008. Mr. Lynch holds a B.S. in Accounting from Pennsylvania State University and an M.B.A. in Finance from George Washington University.

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See “—Involvement in Certain Legal Proceedings” for certain details regarding historical administrative and legal proceedings involving Mr. Lynch.

*Edward Hughes* has served as our Senior Vice President, Worldwide Sales since September 2009. Mr. Hughes holds a B.A. in Philosophy from Catholic University and a J.D. from Potomac Law School.

*Christopher Winters* has served as our General Counsel since September 2015 and our corporate Secretary since November 2015. From June 2013 to August 2015, Mr. Winters was General Counsel at Applied Predictive Technologies, Inc., a software-as-a-service company focused on predictive analytics. From January 2008 to May 2013, Mr. Winters held positions in the legal department of CoStar Group Inc., a provider of commercial real estate information, analytics and online marketplaces. Mr. Winters holds a B.A. in History from Northern Illinois University and a J.D. from Harvard University.

### **Key Employees**

*Marc Wilson* is a Founder of Appian and has served as our Senior Vice President, Global Partners & Industry since January 2014. Mr. Wilson served as our Vice President, Industry Markets from January 2013 to January 2014 and in various other management roles, including as our Vice President, North American Channels, since our founding in August 1999. Mr. Wilson also served as a member of our board of directors from September 2015 to January 2017. Mr. Wilson holds a B.A. in Government from Dartmouth College.

*Michael Beckley* is a Founder of Appian and has served as our Chief Technology Officer since 2007 and Chief Customer Officer since April 2015. From our founding in August 1999 to 2007, Mr. Beckley served as our Vice President of Product Strategy. Mr. Beckley also served as a member of our board of directors from September 2015 to January 2017. Mr. Beckley holds a B.A. in Government from Dartmouth College.

*Suvajit Gupta* has served as our Senior Vice President, Engineering since May 2013. From June 2008 to May 2013, Mr. Gupta served as Chief Architect, Vice President of Development at Eloqua, Inc., a cloud-based marketing automation software company that was acquired by Oracle in 2013. Mr. Gupta holds a B.Tech in Electronics and Communications Engineering from Indian Institute of Technology Kharagpur and an M.S. in Computer and Systems Engineering from Rensselaer Polytechnic Institute.

*Kevin Spurway* has served as our Senior Vice President, Marketing since April 2016. Mr. Spurway served as our Vice President of Operations from October 2014 to March 2016. From July 2010 to October 2014, Mr. Spurway was Senior Vice President of Marketing at MicroStrategy, Inc. Mr. Spurway holds a B.A. in Economics and Government from Dartmouth College and a J.D. from Harvard University.

*Myles Weber* has served as our Chief Information Officer since April 2016. Mr. Weber served as our Vice President, Cloud and Community Services from January 2011 to April 2016. Mr. Weber holds a B.S. in Information and Decision Sciences from the University of Illinois at Chicago.

*Lang Ly* has served as our Vice President, Strategy since March 2016. Ms. Ly served as our Vice President, Business Applications from November 2015 through March 2016, and as our Vice President, Application Management from October 2013 through October 2015. From 1996 through March 2013, Ms. Ly held various positions at Microstrategy, Inc. Ms. Ly has a Bachelor’s Degree in Electrical Engineering from Rensselaer Polytechnic Institute and an M.S. in Information Systems Management from George Washington University.

### **Non-Employee Directors**

*A.G.W. “Jack” Biddle, III* has served as a member of our board of directors since 2008. Mr. Biddle has served as a General Partner of Novak Biddle Venture Partners since he co-founded the venture capital firm in 1996. Mr. Biddle serves as a director for a number of privately held companies. Mr. Biddle holds a B.A. in

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Economics from the University of Virginia. Our board of directors believes that Mr. Biddle's experience investing in technology businesses and his service on numerous private company boards qualify him to serve on our board of directors.

*Prashanth "PV" Boccassam* has served as a member of our board of directors since 2008. Since January 2009, Mr. Boccassam has been a General Partner at Novak Biddle Venture Partners. From November 2012 to September 2016, Mr. Boccassam also served as the Chief Executive Officer of Orchestro, an analytics software company that was a portfolio company of Novak Biddle Venture Partners. Mr. Boccassam serves as a director for a number of privately held companies. Our board of directors believes that Mr. Boccassam's experience founding and investing in technology businesses and his service on numerous private company boards qualify him to serve on our board of directors.

*Michael G. Devine* has served as a member of our board of directors since March 2015. From 2007 until 2015, Mr. Devine owned and operated a consulting practice assisting technology-oriented portfolio companies of private equity firms. From 2008 until 2011, Mr. Devine was a member of the Board of Directors and Audit Committee of Martek Biosciences. Mr. Devine holds a B.A. from Rider University and an M.B.A. from Pennsylvania State University. Our board of directors believes that Mr. Devine's experience as an audit partner focused on technology companies and his experience as a Board and Audit Committee member of a public company qualify him to serve on our board of directors.

*Barbara "Bobbie" Kilberg* has served as a member of our board of directors since January 2017. Since September 1998, Ms. Kilberg has served as President and Chief Executive Officer of the Northern Virginia Technology Council, a membership and trade association for the technology community in Northern Virginia. Ms. Kilberg holds a B.A. in Political Science from Vassar College, an M.A. in Political Science from Columbia University and an L.L.B. from Yale University. Our board of directors believes that Ms. Kilberg's experience working with technology companies at the Northern Virginia Technology Council qualifies her to serve on our board of directors.

*Michael J. Mulligan* has served as a member of our board of directors since 2008. Since February 2001, Mr. Mulligan has served as President of Sea Level Investment Corporation, a personal investment company. Mr. Mulligan was chairman and Chief Executive Officer of Mapquest.com prior to its acquisition by AOL in 2001. Mr. Mulligan also has held senior positions with American Express, OAG and Berlitz International. Mr. Mulligan holds a B.A. from Wheeling Jesuit University and an M.B.A. from Harvard University. Our board of directors believes that Mr. Mulligan's executive experience qualifies him to serve on our board of directors.

### **Involvement in Certain Legal Proceedings**

On December 14, 2000, pursuant to SEC Litigation Release, No. 16829 (December 14, 2000), Mark Lynch, our Chief Financial Officer, consented to the entry of a final judgment without admitting or denying the allegations of the Securities and Exchange Commission, or the SEC, in a complaint against him relating to his service as Chief Financial Officer of MicroStrategy, Inc. The final judgment, entered by the United States District Court for the District of Columbia, permanently enjoined Mr. Lynch from violating antifraud provisions of the federal securities laws and the rules promulgated thereunder and required Mr. Lynch to pay a \$350,000 civil penalty and disgorgement of \$138,000 of the \$11.1 million paid in connection with these matters. The SEC's complaint alleged, among other things, that Mr. Lynch knowingly or recklessly participated in the material overstatement of MicroStrategy, Inc.'s revenues and earnings in its financial statements included in periodic reports and registration statements filed with the SEC, and that Mr. Lynch directly or indirectly falsified or caused to be falsified MicroStrategy, Inc.'s books and records. MicroStrategy, Inc.'s reporting failures related to premature recognition of revenue in multiple element transactions involving software sales and from deals where MicroStrategy, Inc. had not properly executed contracts in the same fiscal period in which revenue was recorded from those deals.

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On January 17, 2001, as a consequence of the judgment against him, Mr. Lynch was suspended from appearing or practicing as an accountant before the SEC. On June 8, 2005, the SEC granted his petition for reinstatement to appear and practice before the SEC as an accountant responsible for the preparation or review of financial statements required to be filed with the SEC, finding that he had complied with the terms of the January 17, 2001 order. On July 6, 2007, the Commonwealth of Pennsylvania State Board of Accountancy ordered that Mr. Lynch's certificate as a certified public accountant be retroactively suspended from January 17, 2001 to June 8, 2005 to coincide with the period of his suspension from practice before the SEC. Mr. Lynch's license as a certified public accountant is presently designated as inactive.

### **Family Relationships**

There are no family relationships among any of our executive officers or directors.

### **Board Composition**

Our board of directors currently consists of seven members. Each director is elected to the board of directors for a one-year term, to serve until the election and qualification of a successor director at our annual meeting of stockholders, or until the director's earlier removal, resignation or death.

All of our directors currently serve on the board of directors pursuant to the provisions of a voting agreement between us and several of our stockholders. This agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors.

### **Director Independence**

Our board of directors has undertaken a review of the independence of the directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning such director's background, employment and affiliations, including family relationships, our board of directors determined that Messrs. Biddle, Boccassam, Devine and Mulligan and Ms. Kilberg, representing five of our seven directors, are "independent directors" as defined under current rules and regulations of the SEC and the listing standards of the NASDAQ Stock Market. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director and the transactions involving them described in "Certain Relationships and Related Party Transactions."

### **Board Committees**

Our board of directors has established an audit committee and a compensation committee and intends to establish a nominating and corporate governance committee in connection with this offering, each of which has the composition and responsibilities described below. From time to time, our board of directors may establish other committees to facilitate the management of our business.

#### ***Audit Committee***

Upon the closing of this offering, our audit committee will consist of three directors, Messrs. Biddle, Devine and Mulligan, each of whom our board of directors has determined satisfies the independence requirements for audit committee members under the listing standards of the NASDAQ Stock Market and Rule 10A-3 of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Each member of our audit committee meets the financial literacy requirements under the rules and regulations of NASDAQ Stock Market and the SEC. Mr. Devine is the chairman of the audit committee and our board of directors has determined that Mr. Devine is

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an audit committee “financial expert” as defined by Item 407(d) of Regulation S-K under the Securities Act. The principal duties and responsibilities of our audit committee include, among other things:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence, and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on financial risk assessment and management;
- reviewing related party transactions;
- obtaining and reviewing a report by the independent registered public accounting firm, at least annually, that describes its internal quality-control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services, other than de minimis non-audit services, to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective immediately prior to the closing of this offering that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

### ***Compensation Committee***

Upon the closing of this offering, our compensation committee will consist of three directors, Messrs. Boccassam and Mulligan and Ms. Kilberg. Our board of directors has determined that each of the compensation committee members is a non-employee member of our board of directors as defined in Rule 16b-3 under the Exchange Act and an outside director as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. Mr. Mulligan will be the chairman of the compensation committee. The composition of our compensation committee meets the requirements for independence under the current listing standards of the NASDAQ Stock Market and current SEC rules and regulations. The principal duties and responsibilities of our compensation committee include, among other things:

- reviewing and approving the compensation and terms of compensatory arrangements for our executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending or terminating and approving incentive compensation and equity plans and other benefit programs; and
- reviewing and establishing general policies relating to compensation and benefits of our employees and reviewing our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective immediately prior to the closing of this offering, that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

### ***Nominating and Corporate Governance Committee***

Upon the closing of this offering, our nominating and corporate governance committee will consist of three directors, Messrs. Boccassam and Mulligan and Ms. Kilberg. Mr. Mulligan will be the chairman of the

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nominating and corporate governance committee. The composition of our nominating and governance committee meets the requirements for independence under the current listing standards of the NASDAQ Stock Market and current SEC rules and regulations. The nominating and corporate governance committee's responsibilities include, among other things:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our board of directors;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and practices; and
- overseeing periodic evaluations of our board of directors' performance including committees of the board of directors.

Our nominating and governance committee will operate under a written charter, to be effective immediately prior to the closing of this offering, that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

### **Code of Conduct**

In connection with this offering, we intend to adopt a Code of Conduct, applicable to all of our employees, executive officers and directors. Following the closing of this offering, the Code of Conduct will be available on our website at [www.appian.com](http://www.appian.com). We expect that any amendments to the Code of Conduct, or any waivers of its requirements, will be disclosed on our website ([www.appian.com](http://www.appian.com)) as required by applicable law or the listing standards of the NASDAQ Stock Market. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

### **Compensation Committee Interlocks and Insider Participation**

None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee. None of the members of our compensation committee is an officer or employee of our company, nor have they ever been an officer or employee of our company.

**EXECUTIVE AND DIRECTOR COMPENSATION**

**2016 Summary Compensation Table**

The following table sets forth information regarding compensation earned with respect to the year ended December 31, 2016 by our principal executive officer and the next two most highly compensated executive officers in 2016, whom we refer to as our named executive officers for 2016.

<u>Name and Principal Position</u>	<u>Salary (\$)</u>	<u>Option Awards (\$)<sup>(1)</sup></u>	<u>Non-Equity Incentive Plan Compensation (\$)<sup>(2)</sup></u>	<u>All Other Compensation (\$)<sup>(3)</sup></u>	<u>Total (\$)</u>
Matthew Calkins <sup>(4)</sup> <i>Chief Executive Officer</i>	400,000	8,317,764	143,750	—	8,861,514
Mark Lynch <i>Chief Financial Officer</i>	265,000	610,694	28,750	9,979	914,423
Edward Hughes <i>Senior Vice President, Worldwide Sales</i>	436,588 <sup>(5)</sup>	—	—	—	436,588

(1) This column reflects the full grant date fair value of options granted during the year measured pursuant to Financial Accounting Standards Board Accounting Standards Codification Topic 718 (ASC 718), the basis for computing stock-based compensation in our consolidated financial statements. Unlike the calculations contained in our consolidated financial statements, this calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the named executive officer will perform the requisite service for the award to vest in full as required by SEC rules. The assumptions we used in valuing options are described in note 6 to our consolidated financial statements included in this prospectus.

(2) The amount represents compensation earned with respect to the year ended December 31, 2016 and paid in 2017. See “—Employment Arrangements—2016 Bonus Plan” for a description of the material terms of the plan pursuant to which this compensation was awarded.

(3) The amount reported represents matching contributions to our 401(k) savings plan, which we provide to all eligible employees.

(4) Mr. Calkins is also a member of our board of directors, but did not receive any additional compensation in his capacity as a director.

(5) Includes commissions of \$121,588.

**Outstanding Equity Awards as of December 31, 2016**

The following table sets forth certain information about outstanding equity awards granted to our named executive officers that remain outstanding as of December 31, 2016.

<u>Name</u>	<u>Grant Date</u>	<u>Option awards<sup>(1)</sup></u>		<u>Option Exercise Price (\$)<sup>(4)</sup></u>	<u>Option Expiration Date</u>
		<u>Number of Securities Underlying Unexercised Options (#) Exercisable<sup>(2)</sup></u>	<u>Number of Securities Underlying Unexercised Options (#) Unexercisable<sup>(3)</sup></u>		
Matthew Calkins	7/20/2016	—	1,828,080 <sup>(5)</sup>	9.46	7/20/2026
Mark Lynch	10/1/2008	72,200	—	0.58	10/1/2018
	2/11/2009	2,000	—	0.58	2/11/2019
	1/27/2012	48,000	12,000 <sup>(6)</sup>	1.16	1/27/2022
	5/1/2012	800	200 <sup>(7)</sup>	1.16	5/1/2022
	6/3/2014	8,000	12,000 <sup>(8)</sup>	3.67	6/3/2024
Edward Hughes	1/7/2015	4,000	16,000 <sup>(9)</sup>	4.11	1/7/2025
	7/20/2016	—	150,000 <sup>(10)</sup>	9.46	7/20/2026
	9/8/2009	414,066	—	0.89	9/8/2019
	1/27/2012	8,000	2,000 <sup>(6)</sup>	1.16	1/27/2022
	5/1/2012	800	200 <sup>(7)</sup>	1.16	5/1/2022
	9/5/2013	240	160 <sup>(11)</sup>	1.59	9/5/2023

(1) All of the option awards listed in the table were granted under our 2007 Stock Option Plan, or the 2007 Plan, the terms of which are described under “—Equity Incentive Plans—2007 Plan.”

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- (2) The shares of Class B common stock reflected in this column have satisfied the applicable option's service vesting requirement but do not become exercisable until the earlier of a change of control (as defined in the 2007 Plan) or the closing of this offering.
- (3) The shares of Class B common stock reflected in this column have not satisfied the option's vesting requirement. In the event the shares of Class B common stock become vested, such shares do not become exercisable until the earlier of a change of control or the closing of this offering, except with respect to the shares of Class B common stock reflected in this column as to Mr. Calkins (as discussed in footnote 5).
- (4) All of the option awards listed in the table were granted with a per share exercise price equal to or above the fair market value of one share of our common stock on the date of grant, as determined in good faith by our board of directors.
- (5) The shares of Class B common stock listed vest and become exercisable upon the occurrence of (a) a change of control in which the value per share of the Class A common stock is equal or greater than \$28.38 and/or (b) the Class A common stock trades at or above \$28.38 for a period equal to or greater than ninety (90) calendar days following the closing of this offering.
- (6) The shares of Class B common stock listed vested on January 27, 2017.
- (7) The shares of Class B common stock listed will vest on May 1, 2017, subject to the recipient's continued service through such vesting date.
- (8) One third of the shares of Class B common stock listed will vest on June 3, 2017 and each of the next two anniversaries thereof, subject to the recipient's continued service through each vesting date.
- (9) One fourth of the shares of Class B common stock listed vested on January 7, 2017. The remaining shares of Class B common stock will vest in three equal installments, on January 7, 2018 and each of the next two anniversaries thereof, subject to the recipient's continued service through each vesting date.
- (10) The shares of Class B common stock listed vest over a five-year period with one fifth of the Class B common stock underlying the option vesting on July 20, 2017 and an additional one fifth of the shares of Class B common stock vesting on each anniversary thereof, subject to the recipient's continued service through each vesting date.
- (11) One half of the shares of Class B common stock listed will vest on September 5, 2017 and the remaining shares of Class B common stock will vest on September 5, 2018, subject to the recipient's continued service through each vesting date.

We may in the future, on an annual basis or otherwise, grant additional equity awards to our executive officers pursuant to our 2017 Equity Incentive Plan, or the 2017 Plan, the terms of which are described below under "—Equity Incentive Plans."

### Employment Arrangements

The terms and conditions of employment for each of our named executive officers are set forth in their respective employment agreements. Each of our named executive officers is an at-will employee. The following table sets forth the current base salaries and fiscal year 2017 bonus target of our named executive officers:

<u>Named Executive Officer</u>	<u>Base Salary (\$)</u>	<u>Fiscal Year 2017 Bonus Target (\$)</u>
Matthew Calkins	440,000	250,000
Mark Lynch	265,000	50,000
Edward Hughes	315,000	— <sup>(1)</sup>

- (1) Mr. Hughes participates in our Sales Commission Plan and does not participate in our 2017 Bonus Plan.

### **Potential Payments upon Termination or Change of Control**

Regardless of the manner in which a named executive officer's service terminates, the named executive officer is entitled to receive amounts earned during his term of service, including salary. Except as described below, our named executive officers are not entitled to any additional severance benefits upon a termination of employment.

*Edward Hughes.* Pursuant to his employment agreement, if Mr. Hughes's employment is terminated by us without cause he is entitled to 12 months' severance.

### **2016 Bonus Plan**

In 2016, certain of our executive officers were eligible to participate in our 2016 Senior Executive Cash Incentive Bonus Plan, or 2016 Bonus Plan. Bonuses were measured as of December 31, 2016 and were paid in

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February 2017. The 2016 Bonus Plan was designed to motivate and reward executives for the attainment of company-wide financial and individual performance goals. Messrs. Calkins and Lynch were eligible to receive more than 100% of their target bonuses if our performance exceeded the targets set forth in the 2016 Bonus Plan. Messrs. Calkins and Lynch received bonuses of \$143,750 and \$28,750, respectively, pursuant to the terms of the 2016 Bonus Plan.

### **2017 Bonus Plan**

Messrs. Calkins and Lynch are eligible to participate in our 2017 Senior Executive Cash Incentive Bonus Plan, or 2017 Bonus Plan. The 2017 Bonus Plan is designed to motivate and reward executives for the attainment of company-wide and individual performance goals. Messrs. Calkins and Lynch are eligible to receive more than 100% of their target bonuses if our performance exceeds the targets set forth in the 2017 Bonus Plan.

### **Sales Commission Plan**

We establish sales commission plans to encourage and reward contributions to our long-term revenue growth. Mr. Hughes was, and continues to be, eligible to receive compensation under our sales commission plans. Under our sales commission plan for 2016, Mr. Hughes' target commission was \$175,000. Mr. Hughes received commissions of \$121,588 pursuant to our sales commission plan for 2016. Under our sales commission plan for 2017, Mr. Hughes' target commission is \$175,000.

### **Director Compensation**

Historically, we have provided cash and/or equity-based compensation to our independent directors who are not employees or affiliated with our largest investors for the time and effort necessary to serve as a member of our board of directors. In addition, our independent directors are entitled to reimbursement of direct expenses incurred in connection with attending meetings of our board of directors or committees thereof.

We expect that our board of directors will adopt a director compensation policy for non-employee directors to be effective upon the closing of this offering.

### **2016 Director Compensation Table**

The following table sets forth information regarding the compensation earned for service on our board of directors during the year ended December 31, 2016 by our directors who were not also our named executive officers. Matthew Calkins, our Chief Executive Officer, is also a member of our board of directors, but did not receive any additional compensation for service as a director. Mr. Calkins's compensation as a named executive officer is set forth above under "—2016 Summary Compensation Table." Mr. Kramer is an executive officer of our company but does not receive any additional compensation for service as a director and is not a named executive officer for 2016.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards(s)<sup>(1)(5)</sup></u>	<u>Non-Equity Incentive Plan Compensation(\$)<sup>(2)</sup></u>	<u>All Other Compensation(\$)<sup>(3)</sup></u>	<u>Total (\$)</u>
Michael G. Devine	20,000	—	—	—	20,000
Michael J. Mulligan	20,000	—	—	—	20,000
Marc Wilson <sup>(4)</sup>	300,000	—	28,750	8,917	337,667
Michael Beckley <sup>(4)</sup>	300,000	—	28,750	7,104	335,854

(1) This column reflects the full grant date fair value of options granted during the year measured pursuant to ASC 718, the basis for computing stock-based compensation in our consolidated financial statements. Unlike the calculations contained in our consolidated financial statements, this calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the director will perform the requisite service for the award to vest in full as required by SEC rules. The assumptions we used in valuing options are described in note 6 to our consolidated financial statements included elsewhere in this prospectus.

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- (2) The amount represents compensation earned with respect to the year ended December 31, 2016 and paid in 2017 pursuant to the terms of our 2016 Bonus Plan.
- (3) The amount reported consists of matching contributions to our 401(k) savings plan, which we provide to all eligible employees, and reimbursement of gym membership.
- (4) Mr. Wilson, our Senior Vice President, Industry Markets, and Mr. Beckley, our Chief Technology Officer, served as members of our board of directors until January 2017. Neither received additional compensation for services as a director.
- (5) The table below shows the aggregate number of option awards outstanding for each of our directors who is not a named executive officer as of December 31, 2016:

Name	Option Awards (#) <sup>(a)(b)</sup>
Michael G. Devine	90,000 <sup>(c)</sup>
Michael J. Mulligan	140,602 <sup>(d)</sup>

- (a) All of the option awards listed in the table were granted under the 2007 Plan.
- (b) Vested and unvested shares of Class B common stock reflected in this column do not become exercisable until the earlier of a change of control or the closing of this offering.
- (c) Two-fifths of the shares of Class B common stock reflected in this column will be fully vested upon the closing of this offering. The remaining shares will vest over a three-year period with 20% of the shares of Class B common stock vesting on March 26, 2018 and 20% of the shares of Class B common stock vesting on each anniversary thereof, subject to the recipient's continued service through each vesting date.
- (d) The shares of Class B common stock reflected here will be fully vested upon the closing of this offering.

## Equity Incentive Plans

### 2017 Equity Incentive Plan

We expect that our board of directors will adopt and our stockholders will approve prior to the closing of this offering our 2017 Plan. We do not expect to utilize our 2017 Plan until after the closing of this offering, at which point no further grants will be made under our 2007 Plan, as described below under "2007 Plan." No awards have been granted and no shares of our Class A common stock have been issued under our 2017 Plan.

**Stock Awards.** The 2017 Plan provides for the grant of incentive stock options within the meaning of Section 422 of the Code, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation, which are collectively referred to as stock awards. Additionally, the 2017 Plan provides for the grant of performance cash awards. Incentive stock options may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

**Share Reserve.** Initially, the aggregate number of shares of our Class A common stock that may be issued pursuant to stock awards under the 2017 Plan after the 2017 Plan becomes effective is the sum of (1) \_\_\_\_\_ shares and (2) the number of shares of Class B common stock reserved for issuance under our 2007 Plan at the time our 2017 Plan becomes effective. Additionally, any shares of Class B common stock subject to stock options or other stock awards granted under our 2007 Plan that would have otherwise returned to our 2007 Plan (such as upon the expiration or termination of a stock award prior to vesting) will be added to, and available for issuance under, our 2017 Plan as an equal number of shares of Class A common stock and the number of shares of our Class A common stock reserved for issuance under our 2017 Plan will automatically increase on January 1 of each year, beginning on January 1, 2018 (assuming the 2017 Plan becomes effective before such date) and continuing through and including January 1, 2027, by \_\_\_\_\_ % of the total number of shares of our Class A and Class B common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares of Class A common stock that may be issued upon the exercise of incentive stock options under our 2017 Plan is \_\_\_\_\_ shares.

No person may be granted stock awards covering more than \_\_\_\_\_ shares of our Class A common stock under our 2017 Plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise or strike price of at least 100% of

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the fair market value on the date the stock award is granted. Additionally, no person may be granted in a calendar year a performance stock award covering more than \_\_\_\_\_ shares or a performance cash award having a maximum value in excess of \$ \_\_\_\_\_. Such limitations are designed to help assure that any deductions to which we would otherwise be entitled with respect to such awards will not be subject to the \$1,000,000 limitation on the income tax deductibility of compensation paid to any covered executive officer imposed by Section 162(m) of the Code.

If a stock award granted under the 2017 Plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our Class A common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2017 Plan. In addition, the following types of shares under the 2017 Plan may become available for the grant of new stock awards under the 2017 Plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award. Shares issued under the 2017 Plan may be previously unissued shares or reacquired shares bought by us on the open market.

*Administration.* Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2017 Plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, (2) determine the number of shares of Class A common stock to be subject to such stock awards, and (3) specify the other terms and conditions, including the strike price or purchase price and vesting schedule, applicable to such awards. Subject to the terms of the 2017 Plan, our board of directors or the authorized committee, referred to as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the authority to modify outstanding awards under our 2017 Plan. Subject to the terms of our 2017 Plan, the plan administrator has the authority, without stockholder approval, to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

*Stock Options.* Incentive and nonstatutory stock options are evidenced by stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2017 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2017 Plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2017 Plan, up to a maximum of 10 years. Unless the terms of an option holder's stock option agreement provide otherwise, if an option holder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the option holder may generally exercise any vested options for a period of three months following the cessation of service. The option term will automatically be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an option holder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of Class A common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order,

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(2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is a nonqualified stock option, and (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the option holder's death.

*Tax Limitations on Incentive Stock Options.* The aggregate fair market value, determined at the time of grant, of our Class A common stock with respect to incentive stock options that are exercisable for the first time by an optionholder during any calendar year under all of our equity incentive plans may not exceed \$100,000. Options or portions thereof that exceed such limit will be treated as nonqualified stock options. No incentive stock option may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant and (2) the term of the incentive stock option does not exceed five years from the date of grant.

*Restricted Stock Awards.* Restricted stock awards are evidenced by restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) cash, check, bank draft or money order, (2) services rendered to us or our affiliates, or (3) any other form of legal consideration. Class A common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule as determined by the plan administrator. Rights to acquire shares under a restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock unit awards that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

*Restricted Stock Unit Awards.* Restricted stock unit awards evidenced by restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration or for no consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Rights under a restricted stock units award may be transferred only upon such terms and conditions as set by the plan administrator. Restricted stock unit awards may be subject to vesting as determined by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

*Stock Appreciation Rights.* Stock appreciation rights are evidenced by stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount in cash or stock equal to (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of Class A common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2017 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2017 Plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation right agreement provides otherwise, if a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term will be further extended in the event

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that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Unless the plan administrator provides otherwise, stock appreciation rights generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. A stock appreciation right holder may designate a beneficiary, however, who may exercise the stock appreciation right following the holder's death.

*Performance Awards.* The 2017 Plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the \$1,000,000 limitation on the income tax deductibility of compensation paid to a covered executive officer imposed by Section 162(m) of the Code. To help assure that the compensation attributable to certain types of performance-based awards will so qualify, our compensation committee can structure such awards so that stock or cash will be issued or paid pursuant to such award only after the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (1) earnings (including earnings per share and net earnings); (2) earnings before interest, taxes and depreciation; (3) earnings before interest, taxes, depreciation and amortization; (4) total stockholder return; (5) return on equity or average stockholders' equity; (6) return on assets, investment, or capital employed; (7) stock price; (8) margin (including gross margin); (9) income (before or after taxes); (10) operating income; (11) operating income after taxes; (12) pre-tax profit; (13) operating cash flow; (14) sales or revenue targets; (15) increases in revenue or product revenue; (16) expenses and cost reduction goals; (17) improvement in or attainment of working capital levels; (18) economic value added (or an equivalent metric); (19) market share; (20) cash flow; (21) cash flow per share; (22) share price performance; (23) debt reduction; (24) implementation or completion of projects or processes; (25) subscriber satisfaction; (26) stockholders' equity; (27) capital expenditures; (28) debt levels; (29) operating profit or net operating profit; (30) workforce diversity; (31) growth of net income or operating income; (32) billings; and (33) to the extent that an award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by our board of directors.

The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (1) in the award agreement at the time the award is granted or (2) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (a) to exclude restructuring and/or certain other specified nonrecurring charges; (b) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated goals; (c) to exclude the effects of changes to generally accepted accounting principles; (d) to exclude the effects of any statutory adjustments to corporate tax rates; and (e) to exclude the effects of any "extraordinary items" as determined under generally accepted accounting principles. In addition, we retain the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the goals. The performance goals may differ from participant to participant and from award to award.

*Other Stock Awards.* The plan administrator may grant other awards based in whole or in part by reference to our Class A common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

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*Changes to Capital Structure.* In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2017 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued upon the exercise of incentive stock options, (4) the class and maximum number of shares subject to stock awards that can be granted in a calendar year or as performance stock awards (as established under the 2017 Plan pursuant to Section 162(m) of the Code) and (5) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

*Corporate Transactions.* In the event of certain specified significant corporate transactions, the plan administrator has the discretion to take any of the following actions with respect to stock awards:

- arrange for the assumption, continuation or substitution of a stock award by a surviving or acquiring entity or parent company;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse of any reacquisition or repurchase right held by us;
- cancel or arrange for the cancellation of the stock award in exchange for such cash consideration, if any, as our board of directors may deem appropriate or for no consideration; or
- make a payment equal to the excess of (1) the value of the property the participant would have received upon exercise of the stock award over (2) the exercise price or strike price otherwise payable in connection with the stock award.

Our plan administrator is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2017 Plan, a significant corporate transaction is generally the consummation of (1) a sale or other disposition of all or substantially all of our consolidated assets, (2) a sale or other disposition of at least 50% of our outstanding securities, (3) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (4) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our Class A common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

*Change in Control.* The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability or settlement in the event of a change in control. Under the 2017 Plan, a change in control is generally (1) the acquisition by a person or entity of more than 50% of our combined voting power other than by merger, consolidation or similar transaction; (2) a consummated merger, consolidation or similar transaction immediately after which our stockholders cease to own more than 50% of the combined voting power of the surviving entity; or (3) a consummated sale, lease or exclusive license or other disposition of all or substantially all of our consolidated assets.

*Amendment and Termination.* Our board of directors has the authority to amend, suspend, or terminate our 2017 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent and provided further that certain types of amendments will require the approval of our stockholders. No incentive stock options may be granted after the tenth anniversary of the date our board of directors adopted our 2017 Plan.

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### **2007 Plan**

Our board of directors adopted, and our stockholders approved, the 2007 Stock Option Plan, as amended, or the 2007 Plan, in May 2007, and was last amended by our board of directors and approved by our stockholders in July 2016. Our 2007 Plan provides for the grant of incentive stock options within the meaning of Section 422 of the Code to our employees, and for the grant of nonstatutory stock options to our officers, directors, employees, consultants and advisers.

**Authorized Shares.** There are 8,413,770 shares of our Class B common stock reserved for issuance under our 2007 Plan. As of December 31, 2016, no shares issued upon the exercise of options granted under our 2007 Plan were outstanding and options to purchase 6,784,448 shares of our Class B common stock were outstanding at a weighted average exercise price of \$4.65 per share. Effective upon the completion of this offering, no further options may be granted under our 2007 Plan, but all outstanding options will continue to be governed by their existing terms.

**Changes to Capital Structure.** In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to the class and number of shares available for future grants under the 2007 Plan and the class and number of shares covered by, and the exercise or purchase price of, each outstanding stock option.

**Administration.** Our board of directors, or a committee thereof appointed by our board of directors, administers our 2007 Plan and the options granted under it. Our board of directors delegated its authority to administer our 2007 Plan to our compensation committee.

**Stock Options.** The 2007 Plan provides for the grant of nonqualified and incentive stock options to purchase Class B common stock. The 2007 Plan requires options to have an exercise price not less than the fair market value of the underlying shares on the date of grant and a term not exceeding 10 years. Options granted under the 2007 Plan are not exercisable unless and until there is a change of control (as defined in the 2007 Plan) or we complete an underwritten public offering of our common stock pursuant to an effective registration statement filed under the Securities Act of 1933, whichever occurs first.

**Non- Transferability.** Generally, the 2007 Plan does not allow for the transfer of awards and only the recipient of an award may exercise such award during his or her lifetime.

**Corporate Transactions.** Our 2007 Plan provides that, in the event of a specified change of control transaction, including a merger or consolidation in which we are a party, or the sale, exchange or transfer of all or substantially all of our assets, wherein, in either such event, our stockholders immediately before such event do not retain immediately after such event direct or indirect beneficial ownership of more than fifty percent of the total combined voting power of our outstanding voting stock or the corporation or corporations to which our assets were transferred, the surviving, continuing, successor, or purchasing corporation or parent corporation thereof, as the case may be, may either assume our rights and obligations under each outstanding option or substitute for each outstanding option a substantially equivalent option for the acquiring corporation's stock. In the event that the acquiring corporation refuses to assume or substitute for each outstanding option, any option that is not exercised as of the date of the event will terminate and cease to be outstanding.

**Amendment and Termination.** As noted above, in connection with this offering, the 2007 Plan will be terminated and no further options will be granted thereunder. All outstanding options under the 2007 Plan will continue to be governed by their existing terms.

### **401(k) Plan**

We maintain a defined contribution retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may defer eligible compensation

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on a pre-tax basis, up to the statutorily prescribed annual limits on contributions under the Code. We have the ability to make discretionary contributions to the 401(k) plan. For 2016, during each pay period, we made matching contributions of \$0.50 for each \$1.00 of employee contribution up to a maximum of 4% of the employee's gross compensation for the applicable pay period. We expect to do the same in 2017. Employee contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participant's directions. Employees are immediately and fully vested in their contributions. The vesting of contributions we make is tied to years of service with our contributions being fully vested after four years of service. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

### **Limitations on Liability and Indemnification Matters**

Upon the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation to be in effect upon the closing of this offering will provide that we are authorized to indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws to be in effect upon the closing of this offering will provide that we are required to indemnify our directors and executive officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we are required to advance expenses incurred by a director or executive officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated bylaws will also provide our board of directors with discretion to indemnify our other officers and employees when determined appropriate by our board of directors. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses, including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws to be in effect upon the closing of this offering may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if

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successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

### **Rule 10b5-1 Sales Plans**

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our Class A common stock (including Class A common stock issuable upon conversion of Class B common stock held by them) on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or executive officer when entering into the plan, without further direction from them. The director or executive officer may amend or terminate a Rule 10b5-1 plan in some circumstances. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be subject to the lock-up agreement that the director or executive officer has entered into with the underwriters.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a summary of transactions since January 1, 2014 to which we have been a participant in which the amount involved exceeded or will exceed \$120,000, and in which any of our then directors, executive officers or holders of more than 5% of any class of our capital stock at the time of such transaction, or any members of their immediate family, had or will have a direct or indirect material interest.

### Series B Preferred Stock Financing

In February 2014, we sold an aggregate of 6,120,050 shares of our Series B convertible preferred stock at a price of \$6.1274 per share for aggregate proceeds of approximately \$37.5 million. The following table summarizes the purchases of shares of our Series B convertible preferred stock by our directors, executive officers and holders of more than 5% of any class of our capital stock:

<u>Related Party</u>	<u>Shares of Series B Preferred Stock (#)</u>
Entities affiliated with New Enterprise Associates <sup>(1)</sup>	6,118,418

(1) Consists of 6,114,338 shares of Series B preferred stock held by New Enterprise Associates 14, L.P. and 4,080 shares of Series B preferred stock held by NEA Ventures 2014, L.P. For additional information regarding beneficial ownership of these shares see note 2 to the beneficial ownership table in "Principal Stockholders."

### Repurchase of Common Stock

In February 2014, we repurchased an aggregate of 6,185,548 shares of our common stock from our founders and certain option holders, at a price equal to \$6.1274 per share, less the applicable exercise price in the case of shares subject to options, for aggregate cash consideration of approximately \$37.5 million. The following table summarizes shares of our common stock repurchased from our directors, executive officers and holders of more than 5% of any class of our capital stock, or any members of their immediate family, as of the date of such transaction:

<u>Related Party</u>	<u>Shares of Common Stock (#)</u>
Matthew Calkins	3,575,282
Michael Beckley	1,400,000
Marc Wilson	450,000
Robert C. Kramer	300,000
Edward Hughes	106,366
Mark Lynch	33,800
Elizabeth Epstein <sup>(1)</sup>	5,200

(1) Ms. Epstein joined us in 2006 and later became Mr. Kramer's wife.

### Investors' Rights, Management Rights, Voting and Co-Sale Agreements

In connection with our preferred stock financings, we entered into investors' rights, management rights, voting and right of first refusal and co-sale agreements containing registration rights, information rights, voting rights and rights of first refusal, among other things, with certain holders of our preferred stock and certain holders of our Class B common stock. These stockholder agreements will terminate upon the closing of this offering, except for the registration rights granted under our investors' rights agreement, as more fully described in "Description of Capital Stock—Registration Rights."

### **Employment Arrangements**

We have entered into employment agreements with certain of our executive officers. For more information regarding these agreements with our named executive officers, see “Executive and Director Compensation—Employment Arrangements.” In addition, in January 2006 we hired Elizabeth Epstein, who later became Mr. Kramer’s wife. Ms. Epstein remained in our employ through February 29, 2016. In consideration of services, Ms. Epstein received salary, commission, bonus and 401(k) matching contributions aggregating approximately \$267,500, comprised of base salary of approximately \$147,500, commissions of approximately \$88,500, bonus of approximately \$27,000 and matching contributions to our 401(k) savings plan of approximately \$3,500, in 2014, \$196,000, comprised of base salary of approximately \$175,000, commissions of approximately \$17,500 and matching contributions to our 401(k) savings plan of approximately \$3,500, in 2015 and \$19,000, comprised of base salary net of accrued vacation of approximately \$13,000, bonus of \$5,000 and matching contributions to our 401(k) savings plan of approximately \$1,000, in 2016. In January 2006 we also hired Jim Beckley, the brother of Michael Beckley, who was a member of our board of directors from September 2015 to January 2017. In consideration of services, Jim Beckley received salary, bonus and other compensation aggregating approximately \$103,000, comprised of base salary of approximately \$87,000, bonus of \$2,500, reimbursement of relocation expenses of approximately \$12,000 and reimbursement of insurance costs of approximately \$1,500, in 2014, approximately \$100,000, comprised of base salary of approximately \$92,000 and reimbursement of insurance costs of approximately \$8,000, in 2015, and approximately \$105,500, comprised of base salary of approximately \$94,000, bonus of approximately \$3,500 and reimbursement of insurance costs of approximately \$8,000, in 2016. Amounts paid to Jim Beckley in 2015 and 2016 were paid in Australian dollars and are presented here in U.S. dollars based on the exchange rate on December 31, 2016.

### **Stock Option Grants to Directors and Executive Officers**

We have granted stock options to our certain of our directors and executive officers. For more information regarding the stock options and stock awards granted to our directors and named executive officers see “Executive and Director Compensation.”

### **Indemnification Agreements**

We plan to enter into indemnification agreements with each of our directors and executive officers in connection with this offering. The indemnification agreements and our amended and restated bylaws, each to be in effect upon the closing of this offering, require us to indemnify our directors and executive officers to the fullest extent permitted by Delaware law. For more information regarding these agreements, see “Executive and Director Compensation—Limitations on Liability and Indemnification Matters.”

### **Related Person Transaction Policy**

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. Prior to the closing of this offering, we expect to adopt a written related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. The policy will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants and in which the amount involved exceeds \$120,000. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was

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not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related person transactions and to effectuate the terms of the policy.

In addition, under our Code of Conduct, which we intend to adopt in connection with this offering, our employees and directors have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

All of the transactions described above were entered into prior to the adoption of the written policy, but all were approved by our board of directors considering similar factors to those described above.

## PRINCIPAL STOCKHOLDERS

The following table sets forth the beneficial ownership of our common stock as of December 31, 2016 and as adjusted to reflect the sale of Class A common stock offered by us in this offering, for:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our Class A common stock or Class B common stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The percentage ownership information shown in the table prior to this offering is based upon no shares of Class A common stock and 52,437,876 shares of Class B common stock outstanding as of December 31, 2016, after giving effect to the reclassification of the outstanding shares of existing common stock into an equal number of shares of Class B common stock and the conversion of all outstanding shares of preferred stock into an aggregate of 18,163,158 shares of our Class B common stock. The percentage ownership information shown in the table after this offering is based upon \_\_\_\_\_ shares of Class A common stock and \_\_\_\_\_ shares of Class B common stock outstanding as of December 31, 2016, assuming the sale of \_\_\_\_\_ shares of Class A common stock by us in the offering and no exercise of the underwriters' over-allotment option.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable on or before March 1, 2017, which is 60 days after December 31, 2016. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The information contained in the following table is not necessarily indicative of beneficial ownership for any other purpose, and the inclusion of any shares in the table does not constitute an admission of beneficial ownership of those shares. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

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Except as otherwise noted below, the address for persons listed in the table is c/o Appian Corporation, 11955 Democracy Drive, Suite 1700, Reston, Virginia 20190.

<u>Name of Beneficial Owner</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percent of Shares Beneficially Owned</u>		<u>% of Total Voting Power After the Offering†</u>
		<u>Prior to the Offering</u>	<u>After the Offering</u>	
<b>5% or greater stockholders:</b>				
Entities affiliated with Novak Biddle Venture Partners <sup>(1)</sup>	11,248,214	21.5		
Entities affiliated with New Enterprise Associates <sup>(2)</sup>	6,118,418	11.7		
<b>Named executive officers and directors:</b>				
Matthew Calkins <sup>(3)</sup>	28,699,612	54.7		
Mark Lynch <sup>(4)</sup>	151,000	*		
Edward Hughes <sup>(5)</sup>	425,106	*		
A.G.W. “Jack” Biddle, III <sup>(1)</sup>	11,248,214	21.5		
Prashanth “PV” Boccassam <sup>(1)</sup>	—	—		
Michael G. Devine <sup>(6)</sup>	18,000	*		
Barbara “Bobbie” Kilberg	—	—		
Robert C. Kramer <sup>(7)</sup>	2,720,000	5.2		
Michael J. Mulligan <sup>(8)</sup>	140,602	*		
All current executive officers and directors as a group (9 persons) <sup>(9)</sup>	43,402,534	81.5		
<b>Other founders:</b>				
Marc Wilson <sup>(10)</sup>	2,320,000	4.4		
Michael Beckley <sup>(11)</sup>	1,460,000	2.8		

\* Represents beneficial ownership of less than 1%.

† Represents the voting power with respect to all shares of our Class A common stock and Class B common stock, voting as a single class. Each share of Class A common stock will be entitled to one vote per share, and each share of Class B common stock will be entitled to ten votes per share. The Class A common stock and Class B common stock will vote together on all matters (including the election of directors) submitted to a vote of stockholders, except under limited circumstances described in “Description of Capital Stock—Class A Common Stock and Class B Common Stock—Voting Rights.”

(1) Consists of 8,998,571 shares of Class B common stock held by Novak Biddle Venture Partners V, L.P. and 2,249,643 shares of Class B common stock held by Novak Biddle Company V, LLC. Novak Biddle Company V, LLC is the general partner of Novak Biddle Venture Partners V, L.P. AGW Biddle III, one of our directors, and E. Rogers Novak, Jr. are the managing members of Novak Biddle Company V, LLC and share voting and investment power over the shares held by Novak Biddle Venture Partners V, L.P. The principal business address of Novak Biddle Venture Partners V, L.P. is 7501 Wisconsin Avenue, East Tower, Suite 1380, Bethesda, MD 20814.

(2) Consists of 6,114,338 shares of Class B common stock held by New Enterprise Associates 14, L.P., or NEA 14, and 4,080 shares of Class B common stock held by NEA Ventures 2014, L.P., or Ven 2014. The shares directly held by NEA 14 are indirectly held by NEA Partners 14, L.P., or NEA Partners 14, the sole general partner of NEA 14, NEA 14 GP, LTD, or NEA 14 LTD, the sole general partner of NEA Partners 14 and each of the individual directors of NEA 14 LTD. The individual directors of NEA 14 LTD, collectively the NEA 14 Directors, are M. James Barrett, Peter J. Barris, Forest Baskett, Anthony A. Florence, Jr., Patrick J. Kerins, David M. Mott, Scott D. Sandell, Peter Sonsini and Ravi Viswanathan. NEA 14, NEA Partners 14 and NEA 14 LTD and the NEA 14 Directors share voting and dispositive power with regard to our securities directly held by NEA 14. Karen P. Welsh, the general partner of Ven 2014, has voting and dispositive power with regard to our securities directly held by Ven 2014. The principal business address of NEA 14 and Ven 2014 is 1954 Greenspring Drive, Suite 600, Timonium, Maryland 21093.

(3) Consists of 7,006,178 shares of Class B common stock held directly by Mr. Calkins and 21,018,540 shares of Class B common stock held by Calkins Family LLC, for which Mr. Calkins serves as the managing member.

(4) Consists of 151,000 shares of Class B common stock issuable upon the exercise of options.

(5) Consists of 425,106 shares of Class B common stock issuable upon the exercise of options.

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- (6) Consists of 18,000 shares of Class B common stock issuable upon the exercise of options.
- (7) Consists of 2,620,000 shares of Class B common stock held by The Robert C. Kramer Trust, for which Mr. Kramer serves as sole trustee and beneficiary, and 100,000 shares of Class B common stock issuable upon the exercise of options.
- (8) Consists of 140,602 shares of Class B common stock issuable upon the exercise of options.
- (9) Includes 834,708 shares of Class B common stock issuable upon the exercise of options.
- (10) Consists of 2,020,000 shares of Class B common stock held directly by Mr. Wilson, 270,000 shares of Class B common stock held by Rachael Fried, his spouse and 30,000 shares of Class B common stock held by the Rachael J. Fried Family Trust Dated December 29, 2016, for which Messrs. Wilson and Beckley serve as trustees.
- (11) Consists of 1,400,000 shares of Class B common stock held directly by Mr. Beckley, 30,000 shares of Class B common stock held by the Rachael J. Fried Family Trust Dated December 29, 2016, for which Messrs. Wilson and Beckley serve as trustees, and 30,000 shares of Class B common stock held by the Marc S. Wilson Spousal Limited Access Trust Dated December 29, 2016, for which Mr. Beckley serves as a trustee.

## DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock, certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as each will be in effect upon the closing of this offering, and certain provisions of Delaware law are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part. We refer in this section to our amended and restated certificate of incorporation and amended and restated bylaws that we intend to adopt in connection with this offering as our certificate of incorporation and bylaws, respectively.

### General

Upon the closing of this offering, our certificate of incorporation will provide for two classes of common stock: Class A common stock and Class B common stock.

Upon the closing of this offering, our authorized capital stock will consist of 600,000,000 shares, all with a par value of \$0.0001 per share, of which:

- 500,000,000 shares are designated as Class A common stock; and
- 100,000,000 shares are designated as Class B common stock

As of December 31, 2016, after giving effect to the conversion of all outstanding shares of our preferred stock into shares of Class B common stock in connection with the closing of this offering, there would have been outstanding:

- 52,437,876 shares of Class B common stock held by 13 stockholders; and
- 6,868,808 shares of Class B common stock issuable upon exercise of outstanding options and an outstanding warrant.

Our shares of Class A common stock and Class B common stock are not redeemable and have no preemptive rights.

### Class A Common Stock and Class B Common Stock

#### *Voting Rights*

Holders of our Class A common stock and Class B common stock have identical rights, provided that, except as otherwise expressly provided in our certificate of incorporation or required by applicable law, on any matter that is submitted to a vote of our stockholders, holders of our Class A common stock are entitled to one vote per share of Class A common stock and holders of our Class B common stock are entitled to ten votes per share of Class B common stock. Holders of shares of Class A common stock and Class B common stock will vote together as a single class on all matters (including the election of directors) submitted to a vote of stockholders. In addition, each class of our common stock may have the right to vote separately in certain instances as listed below under “—Economic Rights.”

A separate vote of our Class B common stock will also be required in order for us to, directly or indirectly, take action in the following circumstances:

- if we propose to amend, alter or repeal any provision of our certificate of incorporation or our bylaws that modifies the voting, conversion or other powers, preferences or other special rights or privileges or restrictions of the Class B common stock; or
- if we reclassify any outstanding shares of Class A common stock into shares having rights as to dividends or liquidation that are senior to the Class B common stock or the right to more than one vote for each share thereof.

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Upon the closing of this offering, our certificate of incorporation will provide that the authorized number of shares of Class A common stock or Class B common stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote of the holders of a majority of the combined voting power of the outstanding shares of Class A common stock and Class B common stock, voting together as a single class. In addition, except as expressly permitted by the certificate of incorporation we may not issue any shares of Class B common stock, unless that issuance is approved by the affirmative vote of the holders of a majority of the outstanding shares of Class B common stock.

We have not provided for cumulative voting for the election of directors in our certificate of incorporation.

### ***Economic Rights***

Except as otherwise expressly provided in our certificate of incorporation or required by applicable law, shares of Class A common stock and Class B common stock will have the same rights and privileges and rank equally, share ratably and be identical in all respects as to all matters, including, without limitation, those described below.

*Dividends.* Any dividend or distribution paid or payable to the holders of shares of Class A common stock and Class B common stock shall be paid pro rata, on an equal priority, pari passu basis; provided, however, that if a dividend or distribution is paid in the form of Class A common stock or Class B common stock (or rights to acquire shares of Class A common stock or Class B common stock), then the holders of the Class A common stock may receive Class A common stock (or rights to acquire shares of Class A common stock) and holders of Class B common stock may receive Class B common stock (or rights to acquire shares of Class B common stock).

*Liquidation.* In the event of our liquidation, dissolution or winding-up, upon the completion of the distributions required with respect to any series of preferred stock that may then be outstanding, our remaining assets legally available for distribution to stockholders shall be distributed on an equal priority, pro rata basis to the holders of Class A common stock and Class B common stock unless different treatment is approved by the affirmative vote of the holders of a majority of the outstanding shares of each of the Class A common stock and Class B common stock, voting separately as a class.

*Subdivisions and Combinations.* If we subdivide or combine in any manner outstanding shares of Class A common stock or Class B common stock, then the outstanding shares of all common stock will be subdivided or combined in the same proportion and manner unless different treatment of the shares of such class is approved by the affirmative vote of the holders of a majority of the outstanding shares of the applicable class of common stock treated adversely, voting separately as a class.

*Change of Control Transaction.* The holders of Class A common stock and Class B common stock will be treated equally and identically with respect to shares of Class A common stock or Class B common stock owned by them unless different treatment is approved by the affirmative vote of the holders of a majority of the outstanding shares of each of the Class A common stock and Class B common stock, voting separately as a class, on (a) the closing of the sale, lease, exclusive license or other disposition of all or substantially all of our assets, (b) the consummation of a merger, reorganization, consolidation, or share transfer which results in our capital stock outstanding immediately before the transaction representing less than a majority of the combined voting power of the voting securities of the company or the surviving or acquiring entity, or (c) the closing of the transfer (whether by merger, consolidation, or otherwise but excluding a *bona fide* equity financing), in one transaction or a series of related transactions, to a person or group of affiliated persons of securities of the company if, after closing, the transferee person or group would hold 50% or more of the outstanding voting power of the company (or the surviving or acquiring entity). However, consideration to be paid or received by a holder of common stock in connection with any such asset sale, merger, reorganization, consolidation, or share transfer under any employment, consulting, severance, or other arrangement will be disregarded for the purposes of determining whether holders of common stock are treated equally and identically.

### ***Conversion***

Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon (1) any transfer, whether or not for value and whether voluntary or involuntary or by operation of law, except for certain transfers described in our certificate of incorporation, including, without limitation, certain transfers for tax and estate planning purposes or (2) the death or disability, as defined in our certificate of incorporation, of the applicable Class B common stockholder (or nine months after the date of death or disability if the stockholder is one of our founders). In addition, on the first trading day following the date on which the outstanding shares of Class B common stock represent less than 10% of the aggregate voting power of our then outstanding capital stock, all outstanding shares of Class B common stock shall convert automatically into Class A common stock, and no additional shares of Class B common stock will be issued.

### **Options**

As of December 31, 2016, options to purchase an aggregate of 6,784,448 shares of Class B common stock were outstanding under our 2007 Plan at a weighted-average exercise price of \$4.65 per share. For additional information regarding the terms of our 2007 Plan, see “Executive and Director Compensation—Equity Incentive Plans—2007 Plan.”

### **Warrants**

As of December 31, 2016, there was an outstanding warrant to acquire an aggregate of 84,360 shares of our Series A preferred stock at an exercise price of \$0.88905 per share, which, following this offering, will be exercisable to purchase the same number of shares of our Class B common stock at the same exercise price per share. This Series A warrant expires in November 2018.

The warrant contains provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations.

### **Registration Rights**

After the closing of this offering, certain holders of the Class B common stock, including holders of the shares of our Class B common stock that will be issued upon conversion of our preferred stock in connection with this offering, will be entitled to certain rights with respect to registration of such shares under the Securities Act pursuant to the terms of an investors’ rights agreement. These shares are collectively referred to herein as registrable securities.

The investors’ rights agreement provides the holders of registrable securities with demand, piggyback and S-3 registration rights as described more fully below. As of December 31, 2016, after giving effect to the conversion of all outstanding shares of preferred stock into shares of our Class B common stock in connection with the closing of the offering, there would have been an aggregate of 18,163,158 shares of Class B common stock that were entitled to demand and S-3 registration rights and 18,247,518 shares of Class B common stock that were entitled to piggyback registration rights.

#### ***Demand Registration Rights***

At any time beginning 180 days after the effective date of the registration statement of which this prospectus forms a part, the holders of a majority of the registrable securities then outstanding have the right to make up to two demands that we file a registration statement under the Securities Act covering registrable securities then outstanding having an aggregate offering price of at least \$5.0 million, subject to specified exceptions.

### ***Piggyback Registration Rights***

If we register any securities for public sale, the holders of our registrable securities then outstanding will each be entitled to notice of the registration and will have the right to include their shares in the registration statement.

These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters of any underwritten offering to limit the number of shares with registration rights to be included in the registration statement, but not below 33% of the total number of securities included in such registration.

### ***Registration on Form S-3***

If we are eligible to file a registration statement on Form S-3, the holders of our registrable securities have the right to demand that we file registration statements on Form S-3; provided, that the aggregate price to the public of the securities to be sold under the registration statement is at least \$1.0 million. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

### ***Expenses of Registration***

We will pay all expenses relating to any demand, piggyback or Form S-3 registration, other than underwriting discounts and commissions, subject to specified conditions and limitations.

### ***Termination of Registration Rights***

The registration rights will terminate five years following the closing of this offering and, with respect to any particular stockholder, when such stockholder holds less than 1% of our outstanding common stock and is able to sell all of its shares during a 90-day period pursuant to Rule 144 under the Securities Act.

## **Anti-Takeover Provisions**

### ***Anti-Takeover Statute***

We are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 <sup>2</sup>/<sub>3</sub>% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;

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- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the person’s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

### ***Anti-Takeover Effects of Certain Provisions of our Certificate of Incorporation and Bylaws to be in Effect Upon the Closing of this Offering***

Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the voting power of the Class A common stock and Class B common stock outstanding will be able to elect all of our directors. Our certificate of incorporation provides for a two-class common stock structure, which provides our founders, current stockholders, executives and employees with significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets.

Our certificate of incorporation and bylaws will also provide that:

- the authorized number of directors may be changed only by resolution of the board of directors prior to the date on which all shares of common stock convert into a single class by resolution of the stockholders;
- vacancies and newly created directorships on the board of directors may be filled (1) by a majority vote of the directors then serving on the board, even though less than a quorum, except as otherwise required by law or determined by the board, or (2) by the stockholders;
- stockholder action may be taken at a duly called meeting of stockholders or, prior to the date on which all shares of common stock convert into a single class, by written consent;
- a special meeting of stockholders may be called by a majority of our whole board of directors, the chair of our board of directors, our chief executive officer or, prior to the date on which all shares of common stock convert into a single class, the holders of at least 10% of the total voting power of our Class A common stock and Class B common stock, voting together as a single class; and
- stockholders seeking to present proposals before any meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and, subject to applicable law, specify requirements as to the form and content of a stockholder’s notice.

The combination of these provisions will make it more difficult for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for another party to effect a change in management.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain

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tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

### **Choice of Forum**

Our certificate of incorporation to be in effect upon the closing of this offering will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty owed by any of our directors, officers or employees to us or our stockholders; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our certificate of incorporation will also provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Several lawsuits have been filed in Delaware challenging the enforceability of similar choice of forum provisions and it is possible that a court could determine such provisions are not enforceable.

### **Transfer Agent and Registrar**

The transfer agent and registrar for our Class A common stock and Class B common stock is . The transfer agent's address is .

### **Listing**

We intend to apply for listing of our Class A common stock on the NASDAQ Global Market under the trading symbol "APPN."

## SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market existed for our capital stock, and although we expect that our Class A common stock will be approved for listing on the NASDAQ Global Market, we cannot assure investors that there will be an active public market for our Class A common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our Class A common stock. Future sales of substantial amounts of Class A common stock in the public market, the availability of shares for future sale or the perception that such sales may occur, however, could adversely affect the market price of our Class A common stock and also could adversely affect our future ability to raise capital through the sale of our Class A common stock or other equity-related securities at times and prices we believe appropriate.

Based on our shares outstanding as of December 31, 2016, upon the closing of this offering, \_\_\_\_\_ shares of our Class A common stock and \_\_\_\_\_ shares of our Class B common stock will be outstanding, or \_\_\_\_\_ shares of Class A common stock and \_\_\_\_\_ shares of our Class B common stock if the underwriters exercise their over-allotment option in full.

All of the shares of Class A common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our “affiliates,” as that term is defined under Rule 144 under the Securities Act. The outstanding shares of Class B common stock held by existing stockholders are “restricted securities,” as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if the offer and sale is registered under the Securities Act or if the offer and sale of those securities qualifies for exemption from registration, including exemptions provided by Rules 144 or 701 promulgated under the Securities Act.

As a result of lock-up agreements and market standoff provisions described below and the provisions of Rules 144 and 701, shares of our common stock will be available for sale in the public market as follows:

- \_\_\_\_\_ shares of our Class A common stock will be eligible for immediate sale upon the closing of this offering; and
- approximately \_\_\_\_\_ shares of our Class B common stock will be eligible for sale upon expiration of lock-up agreements and market standoff provisions described below, beginning 181 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701.

We may issue shares of our capital stock from time to time for a variety of corporate purposes, including in capital-raising activities through future public offerings or private placements, in connection with the exercise of stock options and warrants, vesting of restricted stock units and other issuances relating to our employee benefit plans and as consideration for future acquisitions, investments or other purposes. The number of shares of our capital stock that we may issue may be significant, depending on the events surrounding such issuances. In some cases, the shares we issue may be freely tradable without restriction or further registration under the Securities Act; in other cases, we may grant registration rights covering the shares issued in connection with these issuances, in which case the holders of the shares will have the right, under certain circumstances, to cause us to register any resale of such shares to the public.

### Rule 144

In general, persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of ours who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

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### ***Non-Affiliates***

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates;
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting.

### ***Affiliates***

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. Sales of restricted or unrestricted shares of our common stock by affiliates are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our Class A common stock then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after the closing of this offering based on the number of shares outstanding as of December 31, 2016; or
- the average weekly trading volume of our Class A common stock on the NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

### **Rule 701**

In general, under Rule 701 a person who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been one of our affiliates during the immediately preceding 90 days may sell these shares in reliance upon Rule 144, but without being required to comply with the notice, manner of sale, public information requirements or volume limitation provisions of Rule 144. Rule 701 also permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701. As of December 31, 2016, no shares of our outstanding Class B common stock had been issued in reliance on Rule 701 as a result of exercises of stock options.

### **Form S-8 Registration Statements**

As of December 31, 2016, options to purchase an aggregate 6,784,448 shares of our Class B common stock were outstanding. As soon as practicable after the closing of this offering, we intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register the shares of our common stock that are issuable pursuant to our equity incentive plans, including pursuant to outstanding options. See “Executive and Director Compensation—Equity Incentive Plans” for a description of our equity incentive plans. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below and Rule 144 limitations applicable to affiliates.

### **Lock-Up Agreements**

In connection with this offering, we, our directors and officers, and the holders of all of our common stock and substantially all of our option holders outstanding immediately prior to this offering, have agreed, subject to certain exceptions, not to offer, sell, or transfer any Class A common stock or securities convertible into or exchangeable for our Class A common stock for 180 days after the date of this prospectus without the prior written consent of Morgan Stanley & Co. LLC and Goldman, Sachs & Co. on behalf of the underwriters.

The agreements do not contain any pre-established conditions to the waiver by Morgan Stanley & Co. LLC and Goldman, Sachs & Co. on behalf of the underwriters of any terms of the lock-up agreements. Any determination to release shares subject to the lock-up agreements would be based on a number of factors at the time of determination, including but not necessarily limited to the market price of the Class A common stock, the liquidity of the trading market for the Class A common stock, general market conditions, the number of shares proposed to be sold and the timing, purpose and terms of the proposed sale.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain of our security holders, including our investors' rights agreement and agreements governing our equity awards, that contain market stand-off provisions imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

### **Registration Rights**

Upon the closing of this offering, the holders of 18,247,518 shares of our Class B common stock, or warrants to purchase such shares or their transferees, will be entitled to certain rights with respect to the registration of the offer and sale of their shares under the Securities Act. Registration of the offer and sale of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See "Description of Capital Stock—Registration Rights" for additional information.

## MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a general discussion of the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our Class A common stock by “Non-U.S. Holders” (as defined below). This discussion is for general information purposes only and does not consider all aspects of U.S. federal income taxation that may be relevant to particular Non-U.S. Holders in light of their individual circumstances or to certain types of Non-U.S. Holders subject to special tax rules, including partnerships or other pass-through entities for U.S. federal income tax purposes, banks, financial institutions or other financial services entities, broker-dealers, insurance companies, tax-exempt organizations, pension plans, real estate investment trusts, regulated investment companies, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, persons who use or are required to use mark-to-market accounting, persons that hold our shares as part of a “straddle,” a “hedge,” a “conversion transaction,” “synthetic security”, integrated investment or other risk reduction strategy, certain former citizens or permanent residents of the United States, persons who hold or receive shares of our Class A common stock pursuant to the exercise of an employee stock option or otherwise as compensation, persons that own, or are deemed to own, more than 5% of our Class A common stock (except to the extent specifically set forth below), persons that own, or are deemed to own, our Class B common stock, or investors in pass-through entities (or entities that are treated as disregarded entities for U.S. federal income tax purposes). In addition, this discussion does not address the effects of any applicable gift or estate tax, the potential application of the alternative minimum tax, or any tax considerations that may apply to Non-U.S. Holders of our Class A common stock under state, local or non-U.S. tax laws and any other U.S. federal tax laws.

This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, and applicable Treasury Regulations promulgated thereunder and rulings, administrative pronouncements and judicial decisions that are issued and available as of the date of this registration statement, all of which are subject to change or differing interpretations at any time with possible retroactive effect. We have not sought, and will not seek, any ruling from the Internal Revenue Service, or the IRS, with respect to the tax consequences discussed herein, and there can be no assurance that the IRS will not take a position contrary to the tax consequences discussed below or that any position taken by the IRS would not be sustained. This discussion is limited to a Non-U.S. Holder who will hold our Class A common stock as a capital asset within the meaning of the Code (generally, property held for investment). For purposes of this discussion, the term “Non-U.S. Holder” means a beneficial owner of our shares that is not a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) and is not, for U.S. federal income tax purposes, any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation) created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a court within the United States can exercise primary supervision over the trust’s administration and one or more U.S. persons have the authority to control all of the trust’s substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

If a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) is a beneficial owner of our Class A common stock, the tax treatment of such partnership and a partner in such partnership generally will depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our shares, you should consult your tax advisor regarding the tax consequences of the purchase, ownership, and disposition of our Class A common stock.

**THIS SUMMARY IS NOT INTENDED TO BE TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL**

**INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR CLASS A COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS.**

**Distributions on Our Class A Common Stock**

In general, subject to the discussion below under the headings “Information Reporting and Backup Withholding” and “Foreign Accounts,” distributions, if any, paid on our Class A common stock to a Non-U.S. Holder (to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles) will constitute dividends and be subject to U.S. withholding tax at a rate equal to 30% of the gross amount of the dividend, or a lower rate prescribed by an applicable income tax treaty, unless the dividends are effectively connected with a trade or business carried on by the Non-U.S. Holder within the United States. Any distribution not constituting a dividend (because such distribution exceeds our current and accumulated earnings and profits) will be treated first as reducing the Non-U.S. Holder’s basis in its shares of Class A common stock, but not below zero, and to the extent it exceeds the Non-U.S. Holder’s basis, as capital gain from the sale or exchange of such shares of Class A Common Stock (see “Gain on Sale, Exchange or Other Taxable Disposition of Class A Common Stock” below).

A Non-U.S. Holder who claims the benefit of an applicable income tax treaty generally will be required to satisfy certain certification and other requirements prior to the distribution date. Such Non-U.S. Holders must generally provide us and/or our paying agent, as applicable, with a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E (or other appropriate form) claiming an exemption from or reduction in withholding under an applicable income tax treaty. Such certificate must be provided before the payment of dividends and must be updated periodically. If a Non-U.S. Holder holds Class A common stock through a financial institution or other agent acting on the Non-U.S. Holder’s behalf, the Non-U.S. Holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through intermediaries. If tax is withheld in an amount in excess of the amount applicable under an income tax treaty, a refund of the excess amount may generally be obtained by a Non-U.S. Holder by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty.

Dividends that are effectively connected with a Non-U.S. Holder’s conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder) generally will not be subject to U.S. federal withholding tax if the Non-U.S. Holder files the required forms, including IRS Form W-8ECI, with us and/or our paying agent, as applicable, but instead generally will be subject to U.S. federal income tax on a net income basis at regular graduated rates in the same manner as if the Non-U.S. Holder were a resident of the United States. A corporate Non-U.S. Holder that receives effectively connected dividends may be subject to an additional branch profits tax at a rate of 30%, or a lower rate prescribed by an applicable income tax treaty.

**Gain on Sale, Exchange or Other Disposition of Our Class A Common Stock**

In general, subject to the discussion below under the headings “Information Reporting and Backup Withholding” and “Foreign Accounts,” a Non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on any gain realized upon such holder’s sale, exchange or other disposition of shares of our Class A common stock unless:

- (1) the gain is effectively connected with a trade or business carried on by the Non-U.S. Holder within the United States (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder);
- (2) the Non-U.S. Holder is an individual who is present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met; or

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- (3) we are or have been a “United States real property holding corporation” for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the Non-U.S. Holder held the Class A common stock, and, in the case where shares of our Class A common stock are regularly traded on an established securities market, the Non-U.S. Holder owns, or is treated as owning, more than 5% of our Class A common stock at any time during the foregoing period.

Net gain realized by a Non-U.S. Holder described in clause (1) above generally will be subject to U.S. federal income tax in the same manner as if the Non-U.S. Holder were a resident of the United States. Any gains of a corporate Non-U.S. Holder described in clause (1) above may also be subject to an additional “branch profits tax” at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty.

Gain realized by an individual Non-U.S. Holder described in clause (2) above will be subject to a flat 30% tax, or such lower rate specified in an applicable income tax treaty, which gain may be offset by U.S. source capital losses, even though the individual is not considered a resident of the United States.

For purposes of clause (3) above, a corporation is a United States real property holding corporation, or USRPHC, if the fair market value of its United States real property interests equals or exceeds 50% of the sum of the fair market value of its United States real property interests, the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe that we are not, and we do not anticipate that we will become, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we became a USRPHC, a Non-U.S. Holder would not be subject to U.S. federal income tax on a sale, exchange or other taxable disposition of our Class A common stock by reason of our status as a USRPHC so long as our Class A common stock is regularly traded on an established securities market (within the meaning of the applicable regulations) and such Non-U.S. Holder does not own and is not deemed to own (directly, indirectly or constructively) more than 5% of our outstanding Class A common stock at any time during the shorter of the five-year period ending on the date of disposition and such holder’s holding period. However, no assurance can be provided that our Class A common stock will be regularly traded on an established securities market for purposes of the rules described above. If we are a U.S. real property holding corporation and either our Class A common stock is not regularly traded on an established securities market or a Non-U.S. Holder holds or is deemed to hold (directly, indirectly or constructively) more than 5% of our outstanding Class A common stock during the applicable testing period, such Non-U.S. Holder’s proceeds received on the disposition of shares will generally be subject to withholding at a rate of 15% and such Non-U.S. Holder will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. Prospective investors are encouraged to consult their own tax advisors regarding the possible consequences to them if we are, or were to become, a USRPHC.

### **Information Reporting and Backup Withholding**

Generally, we must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid, the name and address of the recipient, and the amount, if any, of tax withheld. These information reporting requirements apply even if withholding was not required because the dividends were effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States or withholding was reduced by an applicable income tax treaty. Under applicable income tax treaties or other agreements, the IRS may make its reports available to the tax authorities in the Non-U.S. Holder’s country of residence or country in which the Non-U.S. Holder was established.

Dividends paid to a Non-U.S. Holder that is not an exempt recipient generally will be subject to backup withholding, currently at a rate of 28%, unless the Non-U.S. Holder certifies to the payor as to its foreign status, which certification may generally be made on an applicable IRS Form W-8.

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Proceeds from the sale or other disposition of Class A common stock by a Non-U.S. Holder effected by or through a U.S. office of a broker will generally be subject to information reporting and backup withholding, currently at a rate of 28%, unless the Non-U.S. Holder certifies to the withholding agent under penalties of perjury as to, among other things, its name, address and status as a Non-U.S. Holder or otherwise establishes an exemption. Payment of disposition proceeds effected outside the United States by or through a non-U.S. office of a non-U.S. broker generally will not be subject to information reporting or backup withholding if the payment is not received in the United States. Information reporting, but generally not backup withholding, will apply to such a payment if the broker has certain connections with the United States unless the broker has documentary evidence in its records that the beneficial owner thereof is a Non-U.S. Holder and specified conditions are met or an exemption is otherwise established.

Backup withholding is not an additional tax. Any amount withheld under the backup withholding rules from a payment to a Non-U.S. Holder that results in an overpayment of taxes generally will be refunded, or credited against the holder's U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

### **Foreign Accounts**

The Foreign Account Tax Compliance Act, or FATCA, generally imposes a 30% withholding tax on dividends on, and gross proceeds from the sale or disposition of, our Class A common stock if paid to a foreign entity unless (i) if the foreign entity is a "foreign financial institution," the foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is a "non-financial foreign entity," the foreign entity identifies certain direct and indirect U.S. holders of debt or equity interests in such foreign entity or certifies that there are none or (iii) the foreign entity is otherwise exempt from FATCA.

Withholding under FATCA generally (1) applies to payments of dividends on our Class A common stock and (2) will apply to payments of gross proceeds from a sale or other disposition of our Class A common stock made after December 31, 2018. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Under certain circumstances, a Non-U.S. Holder may be eligible for refunds or credits of the tax. Non-U.S. Holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our Class A common stock.

**UNDERWRITING**

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Goldman, Sachs & Co. and Barclays Capital Inc. are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares of Class A common stock indicated below:

<u>Name</u>	<u>Number of Shares of Class A Common Stock</u>
Morgan Stanley & Co. LLC	
Goldman, Sachs & Co.	
Barclays Capital Inc.	
Pacific Crest Securities, a division of KeyBanc Capital Markets Inc.	
Canaccord Genuity Inc.	
Cowen and Company, LLC	
Total	

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of Class A common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of Class A common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of Class A common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ option to purchase additional shares described below. The underwriting agreement also provides that if an underwriter defaults, the purchase commitment of non-defaulting underwriters may be increased or the offering terminated.

The underwriters initially propose to offer part of the shares of Class A common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers. After the initial offering of the shares of Class A common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of Class A common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of Class A common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of Class A common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional shares of Class A common stock.

	<u>Per Share</u>	<u>Total</u>	
		<u>No Exercise</u>	<u>Full Exercise</u>
Public offering price	\$	\$	\$
Underwriting discounts and commissions to be paid by us	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

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The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately \$ . We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to \$ .

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We intend to apply to list our Class A common stock on the NASDAQ Global Market under the trading symbol “APPN.”

We and all directors and officers and the holders of substantially all of our outstanding stock and stock options have agreed that, without the prior written consent of Morgan Stanley & Co. LLC and Goldman, Sachs & Co. on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the Securities and Exchange Commission relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC and Goldman, Sachs & Co. on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph do not apply to:

- the sale of shares to the underwriters;
- the issuance by us of shares of common stock upon the exercise of an option or warrant or other convertible security outstanding on the date of this prospectus; *provided* that no public reports or filings reporting the transaction shall be required or shall be voluntarily made in respect of the issuance during the first 30 days of the restricted period and for any issuance thereafter any public reports or filings reporting the transaction that shall be required or shall be voluntarily made in respect of the issuance during the remainder of the restricted period shall include an appropriate footnote clearly indicating that the filing relates to the exercise of a stock option, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option are subject to a lock-up;
- the approval of by us or the establishment of trading plans by our stockholders pursuant to Rule 10b5-1 under the Exchange Act, for the transfer of shares of common stock by our stockholders; *provided* that such plan does not provide for the transfer of common stock during the restricted period and to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the holder or us regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period;

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- transactions relating to shares of our common stock acquired in open market transactions after the completion of this offering;
- transfers as bona fide gifts or to a trust;
- transfers to current or former partners (general or limited), members or managers of one of our stockholders or to the estates of one of our stockholders or their affiliates, partners, members or managers;
- transfers pursuant to qualified domestic orders or in connection with divorce settlements;
- transfers by our stockholders to us pursuant to arrangements under which we have an option to repurchase shares of our common stock or a right of first refusal with respect to the transfer of such shares;
- the conversion of outstanding shares of our preferred stock into shares of our common stock; or
- the sale or issuance or entry into an agreement providing for the issuance by us of shares of our common stock or any security convertible into or exercisable for shares of our common stock in connection with the acquisition by us of one or more business, technologies, properties or assets (whether by means of merger, stock purchase, asset purchase or otherwise), and the issuance of any such securities pursuant to any such agreement; provided, that the aggregate number of shares of our common stock that we may sell or issue or agree to sell or issue shall not exceed 5% of the total number of shares of our common stock issued and outstanding on the date immediately following the completion of this offering (as well as any issuance and sale of any option exercised by the underwriters); and provided further, that any such securities issued shall be subject to transfer restrictions substantially similar to those applicable to our stockholders.

Morgan Stanley & Co. LLC and Goldman, Sachs & Co., in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option. The underwriters can close out a covered short sale by exercising the option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the option. The underwriters may also sell shares in excess of the option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

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The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

### **Pricing of the Offering**

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were the information set forth in this prospectus and otherwise available to the representatives, our future prospects and those of our industry in general, assessment of our management, conditions of the securities markets at the time of this offering, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common shares, or that the shares will trade in the public market at or above the initial public offering price.

### **Selling Restrictions**

#### ***Canada***

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

***European Economic Area***

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “Relevant Member State”) an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

***United Kingdom***

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (“FSMA”) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

***Hong Kong***

Shares of our common stock may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), or (ii) to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder.

**Japan**

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the “FIEL”) has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

*For Qualified Institutional Investors (“QII”)*

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “QII only private placement” or a “QII only secondary distribution” (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

*For Non-QII Investors*

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “small number private placement” or a “small number private secondary distribution” (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

**Singapore**

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”), (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where shares of our common stock are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries’ rights and interest in that trust shall not be transferable for 6 months after that corporation or that trust has acquired shares of our common stock under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

## LEGAL MATTERS

The validity of the shares of Class A common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Reston, Virginia. Wilson Sonsini Goodrich & Rosati, Professional Corporation, Washington, District of Columbia, is representing the underwriters in connection with this offering.

## EXPERTS

The consolidated financial statements as of December 31, 2015 and 2016 and for each of the three years in the period ended December 31, 2016 included in this Prospectus and in the Registration Statement have been so included in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, appearing elsewhere herein and in the Registration Statement, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares of Class A common stock being offered by this prospectus, which constitutes a part of the registration statement. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the Class A common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at [www.appian.com](http://www.appian.com), at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. **However, the information contained in or accessible through our website is not part of this prospectus or the registration statement of which this prospectus forms a part, and investors should not rely on such information in making a decision to purchase our Class A common stock in this offering.**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

Board of Directors  
Appian Corporation  
Reston, Virginia

We have audited the accompanying consolidated balance sheets of Appian Corporation and its subsidiaries as of December 31, 2015 and 2016 and the related consolidated statements of operations, comprehensive loss, changes in stockholders' deficit, and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Appian Corporation and its subsidiaries at December 31, 2015 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

/s/ BDO USA, LLP  
McLean, Virginia

February 17, 2017

**APPIAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
*(in thousands, except share and per share data)*

	As of December 31,		As of December 31, 2016
	2015	2016	Pro Forma (unaudited)
<b>Assets</b>			
Current assets			
Cash and cash equivalents	\$ 31,393	\$ 31,143	\$ 31,143
Accounts receivable, net of allowance of \$400	34,228	46,814	46,814
Deferred commissions, current	5,316	7,146	7,146
Prepaid expenses and other current assets	2,030	3,281	3,281
Total current assets	<u>72,967</u>	<u>88,384</u>	<u>88,384</u>
Property and equipment, net	2,892	3,101	3,101
Deferred commissions, net of current portion	7,354	10,860	10,860
Deferred tax assets	22	12	12
Other assets	165	381	381
Total assets	<u>\$ 83,400</u>	<u>\$ 102,738</u>	<u>\$ 102,738</u>
<b>Liabilities, Convertible Preferred Stock and Stockholders' Deficit</b>			
Current liabilities			
Accounts payable	\$ 2,633	\$ 5,057	\$ 5,057
Accrued expenses	4,350	2,860	2,860
Accrued compensation and related benefits	5,737	9,554	9,554
Deferred revenue, current	40,220	52,000	52,000
Current portion of long-term debt	—	6,111	6,111
Other current liabilities	564	437	7,645
Total current liabilities	<u>53,504</u>	<u>76,019</u>	<u>83,227</u>
Long-term debt, net of current portion	10,000	13,889	13,889
Deferred tax liabilities	916	32	32
Deferred revenue, net of current portion	12,890	18,108	18,108
Preferred stock warrant liability	650	850	—
Other long-term liabilities	1,415	1,917	1,917
Total liabilities	<u>79,375</u>	<u>110,815</u>	<u>117,173</u>
Commitments and contingencies (Note 10)			
Convertible preferred stock			
Series A convertible preferred stock—par value \$0.0001; 12,127,468 shares authorized and 12,043,108 shares issued and outstanding as of December 31, 2015 and 2016; no shares issued and outstanding pro forma; liquidation preference of \$17,915 as of December 31, 2016	17,058	17,915	—
Series B convertible preferred stock—par value \$0.0001; 6,120,050 shares authorized, issued and outstanding as of December 31, 2015 and 2016; no shares issued and outstanding pro forma; liquidation preference of \$37,500 as of December 31, 2016	37,500	37,500	—
Stockholders' deficit			
Common stock—par value \$0.0001; 61,462,320 shares authorized and 34,274,718 shares issued and outstanding as of December 31, 2015 and 2016; no shares authorized, issued or outstanding pro forma	3	3	—
Class A common stock—par value \$0.0001; no shares authorized, issued or outstanding as of December 31, 2015 and 2016; 500,000,000 shares authorized, no shares issued and outstanding pro forma	—	—	—
Class B common stock—par value \$0.0001; no shares authorized, issued or outstanding as of December 31, 2015 and 2016; 100,000,000 shares authorized, 52,437,876 shares issued and outstanding pro forma	—	—	5
Additional paid-in capital	—	—	53,860
Accumulated other comprehensive income	971	1,330	1,330
Accumulated deficit	(51,507)	(64,825)	(69,630)
Total stockholders' deficit	<u>(50,533)</u>	<u>(63,492)</u>	<u>(14,435)</u>
Total liabilities, convertible preferred stock and stockholders' deficit	<u>\$ 83,400</u>	<u>\$ 102,738</u>	<u>\$ 102,738</u>

*The accompanying notes are an integral part of these consolidated financial statements.*

**APPIAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
*(in thousands, except share and per share data)*

	Year Ended December 31,		
	2014	2015	2016
Revenue:			
Subscriptions, software and support	\$ 37,076	\$ 53,207	\$ 69,972
Professional services	51,920	57,997	62,951
Total revenue	<u>88,996</u>	<u>111,204</u>	<u>132,923</u>
Cost of revenue:			
Subscriptions, software and support	4,273	6,079	7,437
Professional services	32,524	42,402	42,686
Total cost of revenue	<u>36,797</u>	<u>48,481</u>	<u>50,123</u>
Gross profit	52,199	62,723	82,800
Operating expenses:			
Sales and marketing	29,088	38,300	54,137
Research and development	13,488	16,750	22,994
General and administrative	23,373	12,515	17,039
Total operating expenses	<u>65,949</u>	<u>67,565</u>	<u>94,170</u>
Operating loss	(13,750)	(4,842)	(11,370)
Other expense:			
Other expense, net	2,086	1,579	1,792
Interest expense	19	188	982
Total other expense	<u>2,105</u>	<u>1,767</u>	<u>2,774</u>
Net loss before income taxes	(15,855)	(6,609)	(14,144)
Income tax expense (benefit)	1,204	378	(1,683)
Net loss	(17,059)	(6,987)	(12,461)
Accretion of dividends on convertible preferred stock	856	861	857
Net loss attributable to common stockholders	<u>\$ (17,915)</u>	<u>\$ (7,848)</u>	<u>\$ (13,318)</u>
Net loss per share attributable to common stockholders:			
Basic and diluted	\$ (0.50)	\$ (0.23)	\$ (0.39)
Pro forma (unaudited):			
Basic and diluted			\$
Weighted average common shares outstanding:			
Basic and diluted	35,717,803	34,274,718	34,274,718
Pro forma (unaudited):			
Basic and diluted			

*The accompanying notes are an integral part of these consolidated financial statements.*

**APPIAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS**  
*(in thousands)*

	<u>Year Ended December 31,</u>		
	<u>2014</u>	<u>2015</u>	<u>2016</u>
Net loss	\$(17,059)	\$(6,987)	\$(12,461)
Other comprehensive income, net of income taxes:			
Foreign currency translation adjustment	812	159	359
Total comprehensive loss, net of income taxes	<u>\$(16,247)</u>	<u>\$(6,828)</u>	<u>\$(12,102)</u>

*The accompanying notes are an integral part of these consolidated financial statements.*

**APPIAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT**  
**(in thousands, except share data)**

	Common Stock		Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount			
Balance, January 1, 2014	40,000,000	\$ 4	\$ —	\$ (4,612)	\$ (4,608)
Net loss	—	—	—	(17,059)	(17,059)
Repurchase and retirement of common stock	(5,725,282)	(1)	—	(21,012)	(21,013)
Accretion of dividends on convertible preferred stock	—	—	—	(856)	(856)
Accretion of issuance costs on convertible preferred stock	—	—	—	(120)	(120)
Other comprehensive income	—	—	812	—	812
Balance, December 31, 2014	34,274,718	3	812	(43,659)	(42,844)
Net loss	—	—	—	(6,987)	(6,987)
Accretion of dividends on convertible preferred stock	—	—	—	(861)	(861)
Other comprehensive income	—	—	159	—	159
Balance, December 31, 2015	34,274,718	3	971	(51,507)	(50,533)
Net loss	—	—	—	(12,461)	(12,461)
Accretion of dividends on convertible preferred stock	—	—	—	(857)	(857)
Other comprehensive income	—	—	359	—	359
Balance, December 31, 2016	<u>34,274,718</u>	<u>\$ 3</u>	<u>\$ 1,330</u>	<u>\$ (64,825)</u>	<u>\$ (63,492)</u>

*The accompanying notes are an integral part of these consolidated financial statements.*

**APPIAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
*(in thousands)*

	Year Ended December 31,		
	2014	2015	2016
<b>Cash flows from operating activities:</b>			
Net loss	\$(17,059)	\$ (6,987)	\$(12,461)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	610	763	764
Bad debt expense (recovery)	30	(22)	7
Deferred income taxes	399	(291)	(1,122)
Fair value adjustment for warrant liability	351	299	200
Changes in assets and liabilities:			
Accounts receivable	(1,450)	(6,639)	(11,154)
Prepaid expenses and other assets	130	(988)	(1,665)
Deferred commissions	(4,486)	(3,965)	(5,335)
Accounts payable and accrued expenses	1,932	1,058	1,287
Accrued compensation and related benefits	1,929	(968)	3,717
Other current liabilities	1,395	(251)	19
Deferred revenue	16,744	15,490	17,410
Other long-term liabilities	1,009	356	577
Net cash provided by (used in) operating activities	1,534	(2,145)	(7,756)
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(2,633)	(524)	(984)
Net cash used in investing activities	(2,633)	(524)	(984)
<b>Cash flows from financing activities:</b>			
Proceeds from issuance of long-term debt	—	10,000	20,000
Repayment of long-term debt	—	—	(10,000)
Proceeds from issuance of Series B convertible preferred stock, net of offering costs	37,380	—	—
Repurchase of common stock	(21,013)	—	—
Net cash provided by financing activities	16,367	10,000	10,000
Effect of foreign exchange rate changes on cash and cash equivalents	(912)	(930)	(1,510)
Net increase (decrease) in cash and cash equivalents	14,356	6,401	(250)
Cash and cash equivalents, beginning of year	10,636	24,992	31,393
Cash and cash equivalents, end of year	<u>\$ 24,992</u>	<u>\$31,393</u>	<u>\$ 31,143</u>
<b>Supplemental disclosure of cash flow information:</b>			
Cash paid for interest	\$ —	\$ 193	\$ 895
Cash paid for income taxes	\$ 70	\$ 1,055	\$ 610
<b>Supplemental disclosure of non-cash financing activities:</b>			
Accretion of dividends on convertible preferred stock	\$ 856	\$ 861	\$ 857
Accretion of issuance costs on convertible preferred stock	\$ 120	\$ —	\$ —

*The accompanying notes are an integral part of these consolidated financial statements.*

**APPIAN CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Organization and Description of Business**

Appian Corporation (together with its subsidiaries, “Appian,” the “Company,” “we” or “our”) provides a leading low-code software development platform that enables organizations to rapidly develop powerful and unique applications. The applications created on our platform help companies drive digital transformation and competitive differentiation. We were incorporated in the state of Delaware in August 1999. We are headquartered in Reston, Virginia and have offices in Canada, Switzerland, the United Kingdom, France, Germany, the Netherlands, Italy, and Australia.

**2. Significant Accounting Policies**

***Basis of Presentation***

The consolidated financial statements and accompanying notes were prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

***Use of Estimates***

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the amounts reported in these financial statements and accompanying notes. Although we believe that the estimates we use are reasonable, due to the inherent uncertainty involved in making these estimates, actual results reported in future periods could differ from those estimates.

Significant estimates embedded in the consolidated financial statements include revenue recognition, income taxes and the related valuation allowance, stock-based compensation and fair value measurements for our common stock and outstanding warrant.

***Principles of Consolidation***

The accompanying consolidated financial statements include the accounts of Appian and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

***Unaudited Pro Forma Information***

Upon the completion of an initial public offering (“IPO”), all outstanding shares of existing common stock and all outstanding shares of convertible preferred stock will be converted into Class B common stock. In addition, the outstanding warrant to purchase shares of convertible preferred stock will automatically convert into a warrant to purchase shares of Class B common stock. We will also pay a cumulative dividend in cash to the holders of our Series A convertible preferred stock upon the conversion of their shares of preferred stock into Class B common stock, which will occur immediately prior to the closing of the IPO. Accordingly, the accompanying unaudited pro forma balance sheet as of December 31, 2016 has been prepared assuming (i) the conversion of all outstanding shares of convertible preferred stock into an aggregate of 18,163,158 shares of Class B common stock, (ii) the reclassification of our preferred stock warrant liability of \$0.9 million to stockholders’ deficit and (iii) the reclassification of the cumulative dividend of \$7.2 million included in the redemption value of the Series A convertible preferred stock into other current liabilities.

Additionally, as described in “Stock-Based Compensation” below, all of our currently outstanding stock option awards require the satisfaction of both a service condition and a liquidity event condition. The liquidity condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or the effective date of our IPO. We expect to record cumulative stock-based compensation expense related to these stock options upon the pricing of our IPO. Accordingly, the unaudited pro forma balance sheet information as of December 31, 2016 gives effect to cumulative stock-based compensation expense of \$4.8 million associated with these stock options. This pro forma adjustment related to the cumulative stock-based compensation expense has been reflected as an increase to additional paid-in capital and accumulated deficit.

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As further described in Note 9, we have calculated unaudited pro forma basic and diluted net loss per share to give effect to (i) the conversion of the convertible preferred stock, (ii) the reclassification of the preferred stock warrant liability, (iii) the number of additional shares whose proceeds would be necessary to pay the cumulative dividend on the Series A convertible preferred stock and (iv) the number of additional shares whose proceeds would be necessary to repay all outstanding principal and interest and the termination fee related to our long-term debt and the reversal of associated interest expense, net of tax.

### **Revenue Recognition**

We generate revenue primarily through sales of subscriptions to our platform, as well as professional services. We recognize revenue when all of the following conditions are met: (1) there is persuasive evidence of an arrangement; (2) the service or product has been provided to the customer; (3) the amount of fees to be paid by the customer is fixed or determinable; and (4) the collection of related fees is reasonably assured. If collection is not reasonably assured, we defer revenue recognition until collectability becomes reasonably assured. Our arrangements do not contain general rights of return. Revenue is recognized net of any taxes collected from customers and subsequently remitted to governmental authorities.

#### *Subscriptions, Software and Support Revenue*

Subscriptions, software and support revenue is primarily related to (1) software as a service (“SaaS”) subscriptions bundled with maintenance and support and hosting services and (2) term license subscriptions bundled with maintenance and support. To a lesser extent, we also generate revenue from the sale of perpetual software licenses and associated maintenance and support.

Historically, we licensed our software primarily under perpetual licenses, but over time we transitioned from perpetual licenses to subscriptions. As a result, revenue from our perpetual software licenses was 5.0%, 1.9%, and 0.9% of our total revenue for 2014, 2015 and 2016, respectively.

We generally charge subscription fees on a per-user basis. We bill customers and collect payment for subscriptions to our platform in advance on a monthly, quarterly or annual basis. In certain instances, we have had customers pay their entire contract up front.

#### **SaaS Subscriptions**

Our SaaS subscription revenue is derived from customers accessing our cloud offering pursuant to contracts that are generally one to five years in length. We perform all required maintenance and support for our cloud offering and we do not separately charge customers for hosting costs. In these arrangements, our customers do not have the right to take the software on-premises and, as a result, such arrangements are not accounted for within the scope of the software revenue guidance. Revenue from SaaS subscriptions is recognized ratably over the term of the subscription, beginning with the date our service is made available to our customer.

#### **Term License Subscriptions**

Our term license subscription revenue is derived from customers with on-premises installations of our platform pursuant to contracts that are generally one to five years in length. Customers with term license subscriptions have the right to use our software and receive maintenance and support. Since we do not sell maintenance and support separately from the subscription, revenue for the term license subscription and maintenance and support is recognized ratably over the term of the subscription, upon delivery of the platform to the customer when sold on a standalone basis.

#### **Perpetual Licenses**

Our perpetual license revenue is derived from customers with perpetual licenses to our platform and associated maintenance and support contracts. We recognize revenue from perpetual licenses on the date of

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delivery to our customer. We sell maintenance and support to perpetual license customers separately from the perpetual licenses pursuant to agreements that generally renew annually. Maintenance and support revenue is deferred and recognized ratably over the term of the support period.

### *Professional Services*

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance and training related to our platform. Our professional services are not essential to the functionality of our platform because the platform is ready for the customer's use immediately upon delivery and is not modified or customized in any manner.

Consulting services are billed under both time-and-material and fixed-fee arrangements. For standalone time-and-material contracts, we recognize revenue at contractually agreed upon billing rates applied to hours performed, plus the cost of any materials delivered. For standalone fixed-fee contracts, we also recognize revenue as the work is performed using the proportional performance method of accounting. Training revenue is recognized when the associated training services are delivered. Training is also sold in the form of a subscription arrangement where a customer agrees to pay an annual fixed fee for a fixed number of users to have access to all of our training offerings during the year. Revenue from training subscription agreements is recognized ratably over the subscription period.

We defer recognition of revenue from work performed on pending contract modifications until the period in which the modifications are accepted and funding is approved by the customer. Costs of work performed on pending contract modifications are expensed as incurred.

### *Multiple Element Arrangements*

Our multiple element arrangements are from SaaS subscriptions, term license subscriptions, and perpetual licenses that are generally sold in combination with maintenance and support service and frequently with professional services.

### **SaaS Subscriptions**

For multiple element arrangements involving SaaS subscriptions that include professional services in addition to the subscription to our platform, we evaluate each element to determine whether it represents a separate unit of accounting. Because there are third-party vendors who routinely sell and provide the same professional services to our customers, our professional services are deemed to have standalone value apart from the SaaS subscription. Additionally, we offer both SaaS subscriptions and professional services on a standalone basis. Professional services revenue is therefore accounted for separately from subscription fees and recognized as the professional services are performed. We allocate revenue to the elements based on the selling price hierarchy using vendor-specific objective evidence, or VSOE, of selling price, third-party evidence, or TPE, of selling price, or if neither exists, best estimated selling price, or BEBP. In cases where we do not have VSOE or TPE of the elements of our arrangements, we use BEBP to allocate revenue. We determine BEBP for a service by considering multiple factors including, but not limited to, evaluating the weighted average of actual sales prices and other factors such as gross margin objectives, pricing practices and growth strategy. Pricing practices taken into consideration include historic contractually stated prices, volume discounts where applicable and our price lists. While we believe we can make reliable estimates regarding these matters, these estimates are inherently subjective. Once the revenue is allocated to these elements, revenue is recognized as such services are provided.

### **Term License Subscriptions**

For multiple element arrangements involving term license subscriptions, maintenance and support and professional services, we do not have VSOE of fair value for the maintenance and support. Our term license

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subscriptions are generally not sold on a standalone basis, and therefore, we have not established VSOE of fair value for the subscriptions. Consequently, for our bundled arrangements that include certain professional services, there are two undelivered elements for which VSOE of fair value has not been established and, therefore, we utilize the combined services approach and defer all revenue until the software has been delivered and the provision of all services has commenced. We then recognize the entire fee from the arrangement ratably over the remaining period of the arrangement, assuming all other software revenue recognition criteria have been met.

### **Perpetual Licenses**

For multiple element arrangements involving our perpetual software licenses, we allocate revenue to the software license arrangement by determining if VSOE of fair value exists for the undelivered elements, which are usually maintenance and support and professional services. In situations where VSOE of fair value exists for the undelivered elements, we apply the residual method whereby the fees allocated to license revenue are recognized upon delivery, the fees allocated to maintenance and support revenue are recognized over the service period and the fees allocated to professional services and training are recognized as performed. In instances where we lack VSOE of fair value for the undelivered elements, revenue is either deferred until the final element is delivered or recognized ratably over the service period when the only undelivered elements are either professional services or maintenance and support. We have VSOE for maintenance and support elements and professional services elements performed on a time and materials basis. VSOE of fair value is based upon the price charged when the same element is sold separately. In determining VSOE of fair value, we require that a substantial majority of the selling prices fall within a reasonably narrow pricing range. We reassess VSOE annually or more frequently if required.

### **Deferred Revenue**

Deferred revenue primarily consists of amounts billed in advance of revenue recognition from our subscriptions, software, and support and professional services described above. Deferred revenue is recognized as the revenue recognition criteria are met.

### **Cost of Revenue**

#### *Cost of Subscriptions, Software and Support Revenue*

Cost of subscriptions, software and support revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, employee-related costs, including payroll and benefits for our technology operations and customer support teams, and allocated overhead.

#### *Cost of Professional Services Revenue*

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, travel costs, and allocated overhead.

### **Concentration of Credit Risk**

Our financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents and trade account receivables. Cash deposits may be in excess of insured limits. We believe that the financial institutions that hold our cash deposits are financially sound and, accordingly, minimal credit risk exists with respect to these balances.

With regard to our customers, credit evaluation and account monitoring procedures are used to minimize the risk of loss. We believe that no additional credit risk beyond amounts provided for collection loss are inherent in

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accounts receivable. Revenue generated from government agencies represented 34.4%, 32.7% and 26.2% of our revenue for the years ended December 31, 2014, 2015 and 2016, respectively, of which the top three federal government agencies generated 22.9%, 20.8% and 17.7% of our revenue for the years ended December 31, 2014, 2015 and 2016, respectively. Additionally, 25.5%, 19.9% and 19.5% of our revenue earned during the years ended December 31, 2014, 2015 and 2016, respectively, was generated from foreign customers.

No individual customer represented more than 10% of accounts receivable at December 31, 2015. One customer accounted for 17.2% of accounts receivable at December 31, 2016.

### ***Cash and Cash Equivalents***

We consider all highly liquid investments with an original or remaining maturity of three months or less at the date of purchase, as well as overnight repurchase investments, to be cash equivalents.

### ***Accounts Receivable and Allowance for Doubtful Accounts***

Accounts receivable are stated at realizable value, net of an allowance for doubtful accounts. The allowance for doubtful accounts is based on our assessment of the collectability of accounts. We regularly review the composition of the accounts receivable aging, historical bad debts, changes in payment patterns, customer creditworthiness and current economic trends. If the financial condition of our customers were to deteriorate, resulting in their inability to make required payments, additional provisions for doubtful accounts would be required and would increase bad debt expense. To date, our allowance and related bad debt write-offs have been nominal. There was no change in the allowance for doubtful accounts from December 31, 2015 to December 31, 2016.

### ***Deferred Commissions***

Deferred commissions are the incremental costs that are directly associated with subscription agreements with customers and consist of sales commissions paid to our direct sales force. Commissions are considered direct and incremental and as such are deferred and amortized over the terms of the related customer contracts consistent with the related revenue. Amortization of deferred commissions is included in sales and marketing expense in the accompanying consolidated statements of operations. Commission expense was \$3.8 million, \$4.6 million, and \$6.5 million for the years ended December 31, 2014, 2015 and 2016, respectively.

### ***Property and Equipment***

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Significant additions or improvements extending the useful life of an asset are capitalized, while repairs and maintenance costs which do not significantly improve the related assets or extend their useful lives are charged to expense as incurred.

<u>Asset Category</u>	<u>Useful Life (in years)</u>
Computer software	3
Computer hardware	3
Equipment	5
Office furniture and fixtures	10
Leasehold improvements	Shorter of useful life of assets or lease term

### ***Impairment of Long-Lived Assets***

Long-lived assets and certain intangible assets are reviewed for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable through undiscounted cash flows from the use of the assets. If such assets are considered to be impaired, the assets are written down to their estimated fair value. No indicators of impairment were identified for the years ended December 31, 2014, 2015 and 2016.

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### *Fair Value of Financial Instruments*

The carrying amounts of our cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value as of December 31, 2015 and 2016 because of the relatively short duration of these instruments. The carrying value of our long-term debt approximates fair value given interest rates for similar debt instruments available to the Company.

We use a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. The hierarchy requires us to use observable inputs when available, and to minimize the use of unobservable inputs when determining fair value. The three tiers are defined as follows:

- **Level 1.** Observable inputs based on unadjusted quoted prices in active markets for identical assets or liabilities;
- **Level 2.** Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- **Level 3.** Unobservable inputs for which there is little or no market data, which require us to develop our own assumptions.

#### *Assets and Liabilities Measured at Fair Value on a Recurring Basis*

We evaluate our financial assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level in which to classify them for each reporting period. This determination requires significant judgments to be made. The following table summarizes the conclusions reached as of December 31 (in thousands):

	<u>2015</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
<b>Liabilities:</b>				
Series A convertible preferred stock warrant(1)	\$ 650	—	—	\$ 650
	<u>\$ 650</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 650</u>
	<u>2016</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
<b>Liabilities:</b>				
Series A convertible preferred stock warrant(1)	\$ 850	—	—	\$ 850
	<u>\$ 850</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 850</u>

(1) In order to determine the fair value of the convertible preferred stock warrant, we used an option pricing model (“OPM”). Significant inputs for the OPM included an estimate of the fair value of the Series A convertible preferred stock, the remaining contractual life of the warrant, an estimate of the timing of a liquidity event, a risk-free rate of interest and an estimate of our stock volatility using the volatilities of guideline peer companies.

#### *Assets and Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs*

The following table presents the changes in our Level 3 instruments measured at fair value on a recurring basis during the years ended December 31 (in thousands):

	<u>Series A Convertible Preferred Stock Warrant</u>		
	<u>2014</u>	<u>2015</u>	<u>2016</u>
Balance as of January 1	\$ —	\$ 351	\$ 650
Change in fair value of warrant liability	351	299	200
Balance as of December 31	<u>\$ 351</u>	<u>\$ 650</u>	<u>\$ 850</u>

The fair value of the warrant as of December 31, 2013 was de minimis and therefore not recorded as of January 1, 2014.

### ***Stock-Based Compensation***

We account for stock-based compensation expense related to stock-based awards based on the estimated fair value of the award on the grant date. We calculate the fair value of stock options using the Black-Scholes OPM. For service-based awards, stock-based compensation expense is recognized on a straight-line basis over the requisite service period. For performance-based awards, stock-based compensation expense is recognized using the accelerated attribution method, based on the probability of satisfying the performance condition. For awards that contain market conditions, compensation expense is measured using a Monte Carlo simulation model and recognized using the accelerated attribution method over the derived service period based on the expected market performance as of the grant date.

All of our currently outstanding awards require the satisfaction of both a service condition and a liquidity event condition. The liquidity condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or the effective date of our IPO. No compensation expense will be recognized until the performance condition is achieved, at which time the cumulative compensation expense using the accelerated attribution method from the service start date will be recognized.

As discussed in “—Recent Accounting Pronouncements,” we have elected to early adopt Accounting Standards Update No. 2016-09, which, among other things, permits an entity to make an entity-wide policy election to either (1) estimate the number of awards that are expected to vest or (2) account for forfeitures when they occur. We have elected to account for forfeitures as they occur, rather than estimate expected forfeitures.

### ***Basic and Diluted Loss per Common Share***

We use the two-class method to compute net loss per common share because we have issued securities, other than common stock, that contractually entitle the holders to participate in dividends and earnings. These participating securities include our convertible preferred stock which have non-forfeitable rights to participate in any dividends declared on our common stock. The two-class method requires earnings for the period to be allocated between common stock and participating securities based upon their respective rights to receive distributed and undistributed earnings.

Under the two-class method, for periods with net income, basic net income per common share is computed by dividing the net income attributable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Net income attributable to common stockholders is computed by subtracting from net income the portion of current year earnings that the participating securities would have been entitled to receive pursuant to their dividend rights had all of the year’s earnings been distributed. No such adjustment to earnings is made during periods with a net loss, as the holders of the participating securities have no obligation to fund losses.

Diluted net income per common share is computed under the two-class method by using the weighted average number of shares of common stock outstanding, plus, for periods with net income attributable to common stockholders, the potential dilutive effects of stock options and warrants. In addition, we analyze the potential dilutive effect of the outstanding participating securities under the “if-converted” method when calculating diluted earnings per share, in which it is assumed that the outstanding participating securities convert into common stock at the beginning of the period or date of issuance, if later. We report the more dilutive of the approaches (two-class or “if-converted”) as our diluted net income per share during the period.

Due to net losses for the years ended December 31, 2014, 2015 and 2016, basic and diluted loss per share were the same, as the effect of potentially dilutive securities would have been anti-dilutive.

### ***Income Taxes***

We use the asset and liability method of accounting for income taxes in which deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases. We measure deferred tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed. We recognize the effect on deferred tax assets and liabilities of a change in tax rates as income and expense in the period that includes the enactment date. A valuation allowance is established if it is more likely than not that all or a portion of the deferred tax asset will not be realized.

Our tax positions are subject to income tax audits by multiple tax jurisdictions throughout the world. We recognize the tax benefit of an uncertain tax position only if it is more likely than not the position is sustainable upon examination by the taxing authority. We measure the tax benefit recognized as the largest amount of benefit which is more likely than not to be realized upon settlement with the taxing authority. We recognize penalties and interest related to unrecognized tax benefits as income tax expense.

We calculate the current and deferred income tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years and record adjustments based on filed income tax returns when identified. The amount of income taxes paid is subject to examination by U.S. federal, state and foreign tax authorities. The estimate of the potential outcome of any uncertain tax issue is subject to our assessment of relevant risks, facts and circumstances existing at that time. To the extent the assessment of such tax position changes, we record the change in estimate in the period in which we make that determination.

Due to changing economic and political environments in the United States and abroad, we may be impacted by possible tax reform or similar changes in tax law. Specifically, certain proposed changes in the United States may impact the U.S. taxation of our foreign earnings and adversely impact our effective tax rate. However, it is not possible to estimate the impact of such changes at this time and we continue to monitor these changes.

### ***Segment Reporting***

Operating segments are defined as components of an enterprise for which discrete financial information is available that is evaluated regularly by the chief operating decision maker (“CODM”) for purposes of allocating resources and evaluating financial performance. Our CODM is our chief executive officer, who reviews financial information presented on a companywide basis for purposes of allocating resources and evaluating financial performance. As such, our operations constitute a single operating segment and one reportable segment.

### ***Foreign Currency***

Our operations located outside of the United States where the local currency is the functional currency are translated into U.S. dollars using the current rate method. Results of operations are translated at the average rate of exchange for the period. Assets and liabilities are translated at the closing rates on the balance sheet date. Gains and losses on translation of these accounts are accumulated and reported as a separate component of stockholders’ deficit and other comprehensive income (loss).

Gains and losses on foreign currency transactions are recognized in the accompanying consolidated statements of operations as a component of other expense, net. Transaction gains and losses from transactions denominated in foreign currencies resulted in net transaction losses of \$1.7 million, \$1.3 million and \$1.5 million for the years ended December 31, 2014, 2015 and 2016, respectively.

### ***Research and Development***

Research and development expenses include payroll, employee benefits, and other headcount-related costs associated with product development. Our product utilizes a common codebase, whether accessed by customers

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via the cloud or via an on-premises installation. Since our software is sold and licensed externally, we consider our software as external-use software for purposes of applying the capitalized software development guidance. Product development costs are expensed as incurred until technological feasibility has been established, which we define as the completion of all planning, designing, coding and testing activities that are necessary to establish products that meet design specifications including functions, features and technical performance requirements. We have determined that technological feasibility for our software products is reached shortly before they are released for sale. Costs incurred after technological feasibility is established are not significant, and accordingly we expense all research and development costs when incurred.

### **Advertising**

We expense advertising costs as they are incurred. Advertising expenses totaled \$0.5 million for each of the years ended December 31, 2014 and 2015 and \$1.4 million for the year ended December 31, 2016.

### **Recent Accounting Pronouncements**

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act (“JOBS Act”). The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this extended transition period and, as a result, we will not adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

### **Adopted**

In August 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-15, *Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern* (“ASU 2014-15”), which amends ASC Subtopic 205-40 to provide guidance about management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related disclosures. Specifically, the amendments (1) provide a definition of the term “substantial doubt,” (2) require an evaluation of every reporting period, (3) provide principles for considering the mitigating effect of management’s plans, (4) require certain disclosures when substantial doubt is alleviated as a result of consideration of management’s plans, (5) require an express statement and other disclosures when substantial doubt is not alleviated and (6) require an assessment for a period of one year after the date that financial statements are issued. ASU 2014-15 was effective for our year ended December 31, 2016, and its adoption did not have a material impact on our financial condition, results of operations or cash flows.

In April 2015, the FASB issued ASU No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs* (“ASU 2015-03”), which simplifies the presentation of debt issuance costs by requiring that such costs be presented in the consolidated balance sheets as a direct deduction from the carrying value of the associated debt instrument, consistent with debt discounts. Subsequent to the issuance of ASU 2015-03, the SEC staff announced that the presentation of debt issuance costs associated with line-of-credit arrangements may be presented as an asset. This announcement was codified by the FASB in ASU No. 2015-15. These ASUs were effective for our year ended December 31, 2016, and their adoption did not have a material impact on our financial condition, results of operations or cash flows.

In April 2015, the FASB issued ASU No. 2015-05, *Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement* (“ASU 2015-05”), which provides clarification on whether a cloud computing arrangement includes a software license. If a software license is included, the customer should account for the license consistent with its accounting for other software licenses. If a software license is not included, the arrangement should be accounted for as a service contract. ASU 2015-05 was effective for our year ended December 31, 2016, and its adoption did not have a material impact on our financial condition, results of operations or cash flows.

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In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes (Topic 740)* (“ASU 2015-17”), which requires that all deferred tax assets and liabilities, including any related valuation allowance, be classified as noncurrent on the balance sheet. We elected to early adopt ASU 2015-17 beginning with our year ended December 31, 2015. The adoption of ASU 2015-17 did not have a material impact on our financial condition, results of operations or cash flows.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting (Topic 718)* (“ASU 2016-09”), which is intended to simplify several aspects of the accounting for share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. We elected to early adopt ASU 2016-09 beginning with our year ended December 31, 2016, and have applied the guidance retrospectively. The adoption of ASU 2016-09 did not have a material impact on our financial condition, results of operations or cash flows.

### *Not Yet Adopted*

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* (“ASU 2014-09”), which provides new guidance for revenue recognition. ASU 2014-09 provides that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 also requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. Entities have the option of using either a full retrospective or modified retrospective approach for the adoption of the standard. In March 2016, the FASB issued ASU No. 2016-08, *Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)* (“ASU 2016-08”), which clarifies implementation guidance on principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU No. 2016-10, *Identifying Performance Obligations and Licensing* (“ASU 2016-10”), which clarifies the identification of performance obligations and the licensing implementation guidance in ASU 2014-09. In addition, in May 2016, the FASB issued ASU No. 2016-12, *Narrow-Scope Improvements and Practical Expedients* (“ASU 2016-12”), which clarifies the guidance on assessing collectibility, presentation of sales taxes, noncash consideration and completed contracts and contract modifications at transition. For public entities, the new standard is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. For all other entities, the new standard is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods beginning after December 15, 2019. We intend to avail ourselves of the JOBS Act extended transition period that permits us to defer adoption until January 1, 2019. We are currently evaluating the impact the adoption of these standards will have on our consolidated financial statements.

We currently plan to adopt the new standard using the full retrospective approach; however, the decision regarding the adoption method has not been finalized. Our final determination will depend on a number of factors such as the significance of the impact of the new standard on our financial results, system readiness, including that of software procured from third-party providers, and our ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements, as necessary.

We are in the initial stages of our evaluation of the impact of the new standard on our accounting policies, processes, and system requirements. We have assigned internal resources in addition to the engagement of third-party service providers to assist in the evaluation. Furthermore, we have made and will continue to make investments in systems to enable timely and accurate reporting under the new standard. While we continue to assess all potential impacts under the new standard there is the potential for significant impacts to the timing of recognition of revenue, particularly term license subscriptions and professional services revenue. We also expect an impact to our accounting for contract acquisition costs, both with respect to the amounts that will be capitalized as well as the period of amortization.

Under current industry-specific software revenue recognition guidance, we have historically concluded that we did not have VSOE of fair value of the undelivered services related to term license subscriptions, and

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accordingly, have recognized term license subscriptions and related services ratably over the subscription term. Professional services included in an arrangement with subscription revenue has also been recognized ratably over the subscription term. The new standard, which does not retain the concept of VSOE, requires an evaluation of whether term license subscriptions and related services, including professional services, are distinct performance obligations and therefore should be separately recognized at a point in time or over time. Depending on the outcome of our evaluation, the timing of when revenue is recognized could change significantly for term license subscriptions and professional services under the new standard.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (“ASU 2016-02”), which requires that lessees recognize assets and liabilities for leases with lease terms greater than 12 months in the statement of financial position. ASU 2016-02 also requires improved disclosures to help users of financial statements better understand the amount, timing and uncertainty of cash flows arising from leases. The update is effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted. We are currently evaluating the impact the adoption of ASU 2016-02 will have on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”), which aims to reduce the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. ASU 2016-15 will require adoption on a retrospective basis unless it is impracticable to apply, in which case we would be required to apply the amendments prospectively as of the earliest date practicable. ASU 2016-15 is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted. We are currently in the process of evaluating the impact of adoption of this standard on our consolidated financial statements.

### 3. Property and Equipment

Property and equipment consisted of the following as of December 31 (in thousands):

	<u>2015</u>	<u>2016</u>
Computer software	\$ 1,562	\$ 1,701
Computer hardware	1,201	1,408
Leasehold improvements	3,555	4,098
Office furniture and fixtures	386	464
Equipment	96	116
	<u>6,800</u>	<u>7,787</u>
Less: accumulated depreciation	<u>(3,908)</u>	<u>(4,686)</u>
Property and equipment, net	<u>\$ 2,892</u>	<u>\$ 3,101</u>

Depreciation and amortization expense totaled \$0.6 million for the year ended December 31, 2014 and \$0.8 million for each of the years ended December 31, 2015 and 2016.

### 4. Debt

#### *Line of Credit*

At December 31, 2015, we had a \$10.0 million revolving line of credit with a lender, expiring in June 2016, which was subsequently amended in June 2016 to extend the maturity date through June 2017. The amount of borrowing available under the credit facility at any time may not exceed 80% of eligible accounts receivable at such time and any amounts borrowed are collateralized by substantially all of our assets. Amounts drawn on the revolving line of credit bear interest at a floating rate of prime plus 0.75%. The agreement contains certain affirmative covenants related to the timely delivery of financial information to the bank and maintaining a

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liquidity ratio of at least 1.25 to 1, as well as certain customary negative covenants. We were in compliance with all covenants as of December 31, 2016, and would be able to draw up to a maximum of \$3.5 million on the revolving line of credit while maintaining compliance with the liquidity ratio. As of December 31, 2015 and 2016, there were no advances against the line of credit.

### **Term Loan**

In March 2015, we entered into a collateralized \$10.0 million term loan facility with a lender, maturing in March 2019, and borrowed the full amount under the term loan facility in June 2015. In January 2016, we paid off the outstanding balance of the term loan and simultaneously entered into a collateralized \$20.0 million term loan facility, maturing in January 2020. We borrowed the full amount under the term loan facility in January 2016. Amounts drawn on the term loan bear interest at a floating rate of prime plus 1.25%, or 5.00% as of December 31, 2016. We are required to repay the term loan over 48 months. The first 12 months will be interest-only payments followed by 36 months of monthly amortization payments. We may pay off the entire term loan at any time by paying all outstanding principal, accrued interest, and a prepayment fee of 1% of the amount advanced through month 12, 0.5% during months 13 through 24 and no prepayment fee thereafter. The term loan includes a financial covenant related to our short-term liquidity. We were in compliance with this covenant as of December 31, 2016.

### **5. Income Taxes**

For the years ended December 31, 2014, 2015 and 2016, our net (loss) income before income taxes was comprised of the following (in thousands):

	<u>2014</u>	<u>2015</u>	<u>2016</u>
Domestic	\$(11,026)	\$ 1,079	\$ (4,524)
Foreign	(4,829)	(7,688)	(9,620)
Total	<u>\$(15,855)</u>	<u>\$(6,609)</u>	<u>\$(14,144)</u>

For the years ended December 31, 2014, 2015, and 2016, our income tax expense (benefit) was comprised of the following (in thousands):

	<u>2014</u>	<u>2015</u>	<u>2016</u>
Current:			
Federal	\$ 430	\$ 390	\$ (627)
State	128	62	(200)
Foreign	247	217	266
Total current expense (benefit)	<u>805</u>	<u>669</u>	<u>(561)</u>
Deferred:			
Federal	325	(334)	(922)
State	51	43	(230)
Foreign	23	—	30
Total deferred expense (benefit)	<u>399</u>	<u>(291)</u>	<u>(1,122)</u>
Total income tax expense (benefit)	<u>\$1,204</u>	<u>\$ 378</u>	<u>\$(1,683)</u>

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For the years ended December 31, 2014, 2015, and 2016, the provision for income taxes differs from the amount computed by applying the federal statutory income tax rates to our loss before the provision for income taxes, as follows:

	<u>2014</u>	<u>2015</u>	<u>2016</u>
U.S. federal statutory tax rate	34.0%	34.0%	34.0%
State tax expense	(0.8)	(0.9)	1.4
Expense on purchase of common stock	(30.2)	—	—
Foreign rate differential	(7.9)	(29.4)	(17.8)
Nondeductible expenses	(1.5)	(4.1)	(2.3)
Tax credits	3.2	10.0	6.5
Unrecognized tax benefits	(0.5)	(1.8)	(0.2)
Other	(0.5)	(1.9)	(0.2)
Change in valuation allowance	(3.4)	(11.5)	(9.6)
Total	<u>(7.6)%</u>	<u>(5.6)%</u>	<u>11.8%</u>

Deferred tax assets and liabilities reflect the net tax effects of temporary differences between the carrying amount of the assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

As of December 31, 2015 and 2016, significant components of our deferred tax assets and liabilities are as follows (in thousands):

	<u>2015</u>	<u>2016</u>
Deferred tax assets:		
Accrued vacation	\$ 482	\$ 529
Bad debt	157	159
Deferred revenue	3,173	2,176
Deferred rent	603	834
Tax credits	1,381	2,401
Net operating losses	1,289	2,939
Other	209	929
Gross deferred tax assets	7,294	9,967
Less: Valuation allowance	(1,283)	(2,642)
Total deferred tax assets	<u>6,011</u>	<u>7,325</u>
Deferred tax liabilities:		
Depreciation	(491)	(349)
Unbilled receivables	(1,835)	(491)
Prepaid expenses	(4,579)	(6,505)
Total deferred tax liabilities	<u>(6,905)</u>	<u>(7,345)</u>
Net deferred tax liability	<u>\$ (894)</u>	<u>\$ (20)</u>

As of December 31, 2015 and 2016, we had \$0 and \$1.8 million of gross net operating loss (“NOL”) carryforwards for U.S. federal tax purposes, respectively. Federal NOL carryforwards will expire, if unused, in 2036. As of December 31, 2015 and 2016, we had U.S. gross state NOL carryforwards of \$0.1 million and \$1.7 million, respectively. We had tax effected state NOL carryforwards of \$0.1 million as of December 31, 2016. Tax effected state NOL carryforwards as of December 31, 2015 were nominal. U.S. state NOL carryforwards will substantially expire, if unused, in 2036.

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Section 382 of the Internal Revenue Code limits the utilization of the NOLs when ownership changes occur, as defined by that section. A number of states have similar state laws that limit utilization of the state NOLs when ownership changes occur. We have performed an analysis of our Section 382 ownership changes and have determined that all federal and U.S state NOLs are available for use as of December 31, 2016.

As of December 31, 2015 and 2016, we had \$1.8 million and \$2.8 million, respectively, of federal tax credit carryforwards which will expire, if unused, in 2036.

As of December 31, 2015 and 2016, we had \$13.3 million and \$23.7 million, respectively, of gross NOL carryforwards for Swiss tax purposes. The NOL carryforwards will expire, if unused, between 2021 and 2023.

The net change during the year in the total valuation allowance was \$1.4 million, driven by the valuation allowance recorded against the U.S. deferred tax assets and the change in the Switzerland deferred tax assets.

Based on our cumulative operating results as of December 31, 2016, three-year cumulative loss, and assessment of our expected future results of operations, we determined that it was not more-likely-than not that we would be able to realize the U.S. deferred tax assets. We recorded a valuation allowance in the fourth quarter of 2016 on the U.S. deferred tax assets. We have evaluated all evidence, both positive and negative, in assessing the likelihood of realizability and the negative evidence outweighed the positive evidence.

We continue to maintain a full valuation allowance on the deferred tax assets of our subsidiary in Switzerland as we determined that it was not more likely than not that we would be able to realize a benefit from the NOL at that subsidiary. Based on our cumulative operating results as of December 31, 2016, and assessment of our expected future results of operations, we determined that it was not more-likely-than not that we would be able to realize the deferred tax assets prior to expiration.

We are subject to income taxes in the United States, Australia, Canada, France, Germany, Italy, Netherlands, Switzerland, and United Kingdom.

Any undistributed earnings of our foreign subsidiaries are considered to be indefinitely reinvested; accordingly, no U.S. income taxes have been provided thereon. Upon repatriation of those earnings, if any, we would be subject to U.S. income taxes, net of any applicable foreign tax credits, and foreign withholding taxes. We did not have any undistributed earnings at our foreign subsidiaries as of December 31, 2015 and 2016.

As of December 31, 2015 and 2016, we had unrecognized tax benefits of \$0.4 million, of which the entire portion would affect our effective tax rate if recognized. The following table summarizes the activity related to our unrecognized tax benefit from January 1, 2014 to December 31, 2016 (in thousands):

Balance as of January 1, 2014	\$ 218
Additions for tax positions in current years	68
Additions for tax positions in prior years	—
Reductions due to lapse in statutes of limitations	—
Settlements	—
Balance as of December 31, 2014	286
Additions for tax positions in current years	98
Additions for tax positions in prior years	—
Reductions due to lapse in statutes of limitations	—
Settlements	—
Balance as of December 31, 2015	384
Additions for tax positions in current years	171
Additions for tax positions in prior years	—
Reductions due to lapse in statutes of limitations	(136)
Settlements	—
Balance as of December 31, 2016	<u>\$ 419</u>

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We recognize interest and penalties related to uncertain tax positions in income tax expense. During the years ended December 31, 2014, 2015, and 2016, we recognized potential interest and penalties of \$15,000, \$19,000, and \$2,000, respectively, and the cumulative balance of interest and penalties as of December 31, 2015 and 2016 was \$39,000 and \$35,000, respectively.

We anticipate that total unrecognized tax benefits will decrease by approximately \$0.1 million over the next 12 months due to the expiration of certain statutes of limitations.

We file income tax returns in the United States federal jurisdiction and in many state and foreign jurisdictions. The tax years 2011 through 2015 remain open to examination by the major taxing jurisdictions to which we are subject to. We are currently under examination by the Internal Revenue Service for tax year 2014.

### **6. Stock-Based Compensation**

Under the Appian Corporation 2007 Stock Option Plan (the "Plan"), we have reserved shares of common stock for the issuance of stock options to employees, directors, and officers. In July 2016, the Plan was revised to increase the maximum number of shares issuable under the Plan from 4,757,610 to 8,413,770. Of this amount, 1,629,322 shares were available to be issued under the Plan as of December 31, 2016. These shares consist of authorized but unissued or reacquired shares. Options under the Plan may be granted for periods of up to ten years.

Under the Plan, the exercise price of each award is established by the board of directors, but may not be less than the fair market value of a share of our common stock on the grant date. Options generally vest upon the satisfaction of both a service condition and a performance condition. The service condition is satisfied at various rates as determined by us, typically on an annual basis over five years. The performance condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or upon the completion of an IPO. The board of directors, in its sole discretion, can also establish an exercisable event.

We estimate the fair value of stock options using the Black-Scholes OPM, which requires the use of subjective assumptions, including the expected term of the option, the current price of the underlying stock, the expected stock price volatility, expected dividend yield and the risk-free interest rate for the expected term of the option. The expected term represents the period of time the stock options are expected to be outstanding. Due to the lack of sufficient historical exercise data to provide a reasonable basis upon which to otherwise estimate the expected term of the stock options, we use the simplified method to estimate the expected term for stock options granted to employees and directors. Under the simplified method, the expected term of an option is presumed to be the mid-point between the vesting date and the end of the contractual term. Expected volatility is based on historical volatilities for publicly traded stock of comparable companies over the estimated expected term of the stock options. We assume no dividend yield because dividends are not expected to be paid in the near future on our common stock, which is consistent with our history of not paying dividends on our common stock.

The following table summarizes the assumptions used to estimate the fair value of stock options granted during the years ended December 31:

	2014	2015	2016
Risk-free interest rate	1.8% - 2.1%	1.7% - 1.9%	1.3% - 1.5%
Expected term (in years)	6.5	6.5	6.5
Expected volatility	44.7% - 46.0%	39.7% - 44.4%	40.9% - 42.0%
Expected dividend yield	0%	0%	0%

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The following table summarizes the stock option activity for the year ended December 31, 2016:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2016	4,589,988	\$ 2.22	6.0	\$ 24,239
Granted	2,375,080	9.30		
Cancelled	(180,620)	4.22		
Outstanding at December 31, 2016	<u>6,784,448</u>	4.65	6.5	44,259
Exercisable at December 31, 2016	<u>—</u>	\$ —	—	\$ —

The weighted average grant-date fair value of options granted was \$1.81, \$2.61, and \$4.35 per share during the years ended December 31, 2014, 2015, and 2016, respectively.

All of our currently outstanding awards require the satisfaction of both a service condition and a liquidity event condition. The liquidity condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or the effective date of our IPO. No compensation expense will be recognized until the performance condition is achieved, at which time the cumulative compensation expense using the accelerated attribution method from the service start date will be recognized. As of December 31, 2016, performance-based stock option awards with a total grant-date fair value of \$14.9 million were outstanding with no compensation expense recognized.

For the years ended December 31, 2014, 2015 and 2016, no stock-based compensation expense was recognized for our stock option awards because a qualifying event had not occurred.

### **7. Convertible Preferred Stock and Stockholders' Deficit**

We are authorized to issue two classes of capital stock, common stock and preferred stock. We are authorized to issue 79,709,838 total shares, consisting of 61,462,320 shares of common stock and 18,247,518 shares of Series A and Series B convertible preferred stock.

#### ***Common Stock Repurchase***

In February 2014, we purchased, and subsequently retired, 5,725,282 shares of common stock held by common stockholders at a price of \$6.1274 per share. The fair value of our common stock in February 2014 was determined to be \$3.67 per share. The amount representing the fair value of the repurchased shares, \$21.0 million, is included in the accompanying consolidated statement of changes in stockholders' deficit. The difference between the amount paid and the fair value of the common stock, \$14.1 million, was recognized as compensation expense.

Additionally, the board of directors authorized an exercisable event that allowed for the exercise of certain stock options via a cashless exercise. We repurchased, and subsequently retired, 460,266 shares of common stock underlying these stock options from the optionholders, resulting in compensation expense of \$2.4 million.

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The compensation expense related to this transaction is included in the accompanying statement of operations for the year ended December 31, 2014 as follows (in thousands):

<b>Cost of revenue:</b>	
Subscriptions, software and support	\$ 119
Professional services	737
<b>Operating expenses:</b>	
Sales and marketing	1,802
Research and development	515
General and administrative	13,315
	<u>\$16,488</u>

### **Stock Split**

In May 2015, our common stock and convertible preferred stock was split on a two-for-one basis. The number of shares and per-share prices have been retrospectively adjusted to reflect the stock split.

### **Common Stock**

At December 31, 2016, we had reserved shares of common stock for future issuance as follows:

For conversion of Series A and Series B convertible preferred stock	18,163,158
Outstanding stock options	6,784,448
Outstanding preferred stock warrant	84,360
Possible future issuance under equity incentive plan	1,629,322
Total shares of common stock reserved for future issuance	<u>26,661,288</u>

### **Liquidation Rights**

In the event of any liquidation or dissolution of the Company, the holders of common stock are entitled to the remaining assets of the Company legally available for distribution after the payment of the full liquidation preference for all series of outstanding convertible preferred stock.

### **Dividend and Voting Rights**

The holders of common stock are entitled to receive dividends if and when declared by the Company, but not until holders of convertible preferred stock have been paid a dividend on each outstanding share equal to at least 8% of the original issue price. Holders of common stock have the right to one vote per share.

### **Convertible Preferred Stock**

The following table summarizes the issuances of convertible preferred stock:

<u>Name</u>	<u>Original Issue Price per Share</u>	<u>Number of Shares</u>	<u>Conversion Price per Share</u>
Series A convertible preferred stock	\$ 0.88903	12,043,108	\$ 0.88903
Series B convertible preferred stock	\$ 6.1274	6,120,050	\$ 6.1274

Any costs incurred in connection with the issuance of the Series A convertible preferred stock and Series B convertible preferred stock (the "Preferred Stock") have been recorded as a reduction of the carrying amount of

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the Preferred Stock. Since the Preferred Stock has deemed liquidation provisions which require the shares to be redeemed upon a change in control or other deemed liquidation event, these shares are classified outside of permanent equity and carried at redemption value, which includes cumulative dividends in the case of the Series A convertible preferred stock.

### *Dividend Rights*

The holders of our Preferred Stock shall be entitled to receive dividends in preference to any dividend on our common stock at the rate of 8% of the original purchase price per annum for each such series. Such dividends with respect to the Series A convertible preferred stock shall be cumulative and shall accrue from day to day until paid, whether or not the dividends are authorized or declared, whether or not funds are legally available for payment and whether or not the corporation has earnings. Such dividends with respect to the Series B convertible preferred stock shall be non-cumulative and shall not accrue unless declared; provided, however, that in each such case, dividends with respect to the Series A convertible preferred stock and Series B convertible preferred stock shall be payable, on a pari passu basis, only when, as and if declared by the board of directors. In the event dividends are paid on any share of common stock, whether in cash or property, we shall pay an additional dividend on all outstanding shares of Preferred Stock in a per share amount (on an as-if converted to common stock basis) equal to the amount paid or set aside for each share of common stock. We had cumulative dividends of \$6.4 million and \$7.2 million, or \$0.53 and \$0.60 per share, on the Series A convertible preferred stock as of December 31, 2015 and 2016, respectively.

### *Liquidation Rights*

Upon any liquidation (as defined in our certificate of incorporation), before any payment to holders of common stock, the holders of Preferred Stock are entitled to receive an amount per share, on a pari passu basis, equal to the greater of (1) the original purchase price per share for each such series (as adjusted for stock splits, stock dividends, recapitalizations, etc.), plus any accrued but unpaid dividends on such shares, or (2) the amount per share of Preferred Stock the holders would be entitled to receive if all shares of Preferred Stock were converted into shares of common stock. We have the option to pay the portion of the liquidation preference attributable to accrued and unpaid dividends in cash or common stock.

### *Voting Rights*

Each share of Preferred Stock has voting rights equal to an equivalent number of shares of common stock into which it is convertible and votes together as one class with the common stockholders.

### *Conversion Rights*

The holders of the Preferred Stock have the right to convert their shares to common stock at any time. In addition, each share of outstanding Preferred Stock shall automatically be converted into common stock immediately upon the closing of a firm commitment underwritten public offering of common stock by the Company, at a price per share of at least 1.5 times the original issue price of the Series B convertible preferred stock, or \$9.18, pursuant to an effective registration statement under the Securities Act of 1933, as amended, and resulting in at least \$50,000,000 in gross proceeds to the Company, or upon the vote of the requisite holders of Preferred Stock. The number of shares of common stock to which a preferred stockholder shall be entitled to upon conversion shall be the number obtained by dividing the original issue price by the applicable conversion price. No fractional shares will be issued upon conversion of Preferred Stock.

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### *Summary of Activity*

The following table presents a summary of activity for our Preferred Stock issued and outstanding for the years ended December 31, 2014, 2015 and 2016 (dollar amounts in thousands):

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock	
	Amount	Shares	Amount	Shares
Balance as of January 1, 2014	\$ 15,341	12,043,108	\$ —	—
Issuance of Series B convertible preferred stock, net of offering costs of \$120	—	—	37,380	6,120,050
Accretion of dividends on convertible preferred stock	856	—	—	—
Accretion of issuance costs on convertible preferred stock	—	—	120	—
Balance as of December 31, 2014	16,197	12,043,108	37,500	6,120,050
Accretion of dividends on convertible preferred stock	861	—	—	—
Balance as of December 31, 2015	17,058	12,043,108	37,500	6,120,050
Accretion of dividends on convertible preferred stock	857	—	—	—
Balance as of December 31, 2016	\$ 17,915	12,043,108	\$ 37,500	6,120,050

### **8. Warrants**

In November 2008, we issued a warrant to purchase 84,360 shares of our Series A convertible preferred stock in connection with a credit facility with a lender. The warrant has a 10-year term and an exercise price of \$0.88905 per share. This warrant is subject to remeasurement at each reporting period. The fair value of the warrant as of December 31, 2015 and 2016 was \$0.7 million and \$0.9 million, respectively. Subsequent changes in fair value are recorded within other expense, net in the accompanying consolidated statements of operations. The inputs and valuation techniques used to measure the fair value of this warrant are discussed in Note 2.

### **9. Net Loss Per Share**

Diluted loss per share is the same as basic loss per share for all periods presented because the effects of potentially dilutive items were anti-dilutive given our net loss. The following securities have been excluded from the calculation of weighted average common shares outstanding because the effect is anti-dilutive for the years ended December 31:

	2014	2015	2016
Convertible preferred stock:			
Series A convertible preferred stock	12,043,108	12,043,108	12,043,108
Series B convertible preferred stock	6,120,050	6,120,050	6,120,050
Warrant to purchase Series A convertible preferred stock	84,360	84,360	84,360
Stock options	3,886,408	4,589,988	6,784,448

### ***Pro Forma Net Loss Per Share (unaudited)***

The unaudited pro forma net loss per share for the year ended December 31, 2016 gives effect to (1) the conversion of all outstanding shares of convertible preferred stock into an aggregate of 18,163,158 shares of Class B common stock as of January 1, 2016 or at the time of issuance, if later, (2) the reclassification of our preferred stock warrant liability to stockholders' deficit as of January 1, 2016, (3) the number of additional shares whose proceeds would be necessary to pay the cumulative dividend on the Series A convertible preferred stock at an IPO price of \$            per share, the midpoint of the price range set forth on the cover of the prospectus and (4) the number of additional shares whose proceeds would be necessary to repay all outstanding principal and interest and the termination fee related to our long-term debt at an IPO price of \$            per share, the midpoint of

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the price range set forth on the cover of the prospectus. The amounts recorded during the year ended December 31, 2016 to reflect the accretion of dividends on convertible preferred stock and to adjust the preferred stock warrant liability to fair value, as well as interest expense recorded during the year ended December 31, 2016 related to our long-term debt, net of tax, have been added back to net loss attributable to common stockholders to arrive at pro forma net loss attributable to common stockholders.

The following table shows the calculation of the unaudited pro forma basic and diluted net loss per share:

Numerator (in thousands):	
Historical net loss attributable to common stockholders	\$ (13,318)
Plus: accretion of dividends on convertible preferred stock	857
Plus: changes in the fair value of the preferred stock warrant liability	200
Plus: interest expense related to our long-term debt, net of tax	866
Pro forma numerator for basic and diluted loss per share	<u>\$ (11,395)</u>
Denominator:	
Historical denominator for basic and diluted net loss per share—weighted average shares	34,274,718
Plus: conversion of convertible preferred stock to common stock	18,163,158
Plus: additional shares whose proceeds would be necessary to pay the Series A convertible preferred stock cumulative dividend	
Plus: additional shares whose proceeds would be necessary to repay all outstanding principal and interest and the termination fee related to our long-term debt	
Pro forma denominator for basic and diluted net loss per share	<u></u>
Pro forma basic and diluted loss per share	<u>\$</u>

The following securities have been excluded from the calculation of pro forma weighted average common shares outstanding because the effect is anti-dilutive for the year ended December 31, 2016:

Stock options	6,784,448
Warrant to purchase common stock	84,360

## 10. Commitments and Contingencies

### *Operating Leases*

We lease office space and equipment in our headquarters location in Reston, Virginia, as well as in the United Kingdom, France, Germany, Canada, and Australia, under non-cancellable operating lease agreements which have various expiration dates through 2026 for our office space and various expiration dates through 2019 for our equipment.

A summary of our future minimum gross and net lease commitments by year as of December 31, 2016 is as follows (in thousands):

	Office Leases	Equipment Leases
2017	\$ 6,868	\$ 277
2018	6,538	131
2019	6,720	6
2020	4,780	—
2021	2,466	—
Thereafter	1,304	—
	<u>28,676</u>	<u>414</u>
Less: minimum payments to be received from subleases	(527)	—
Total	<u>\$28,149</u>	<u>\$ 414</u>

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We record rent expense using the total minimum rent commitment, amortized on the straight-line method over the term of the lease. The difference between monthly rental payments and recorded rent expense is charged to deferred rent. As of December 31, 2015 and 2016, deferred rent totaled \$1.5 million and \$2.4 million, respectively, and is included within other current liabilities and other long-term liabilities on the accompanying consolidated balance sheets.

In September 2014, we entered into an agreement to sublease a certain rented facility to a subtenant. The sublease agreement commenced on November 1, 2014 and will expire when the original lease agreement expires in October 2017. We received \$0.1 million for the year ended December 31, 2014 and \$0.6 million for each of the years ended December 31, 2015 and 2016 in rental income from the subtenant.

Total rent and lease expense was \$3.8 million, \$4.6 million and \$6.6 million for the years ended December 31, 2014, 2015 and 2016, respectively.

### *Other Commitments*

We also have entered into a non-cancellable agreement for the use of technology that is integral in the development of our software and pay annual royalty fees of \$0.3 million.

### *Letters of Credit*

As of December 31, 2015 and 2016, we had outstanding letters of credit totaling \$0.8 million and \$1.3 million, respectively, in connection with securing our leased office space. All letters of credit are secured by our borrowing arrangement as described in Note 4.

### *Legal*

From time to time, we are subject to legal, regulatory and other proceedings and claims that arise in the ordinary course of business. There are no issues or resolution of any matters that are expected to have a material adverse impact on our consolidated financial statements.

## **11. Segment and Geographic Information**

The following table summarizes revenue by geography for the years ended December 31 (in thousands):

	<u>2014</u>	<u>2015</u>	<u>2016</u>
Revenue:			
Domestic	\$ 66,285	\$ 89,043	\$ 107,069
International	22,711	22,161	25,854
Total	<u>\$ 88,996</u>	<u>\$ 111,204</u>	<u>\$ 132,923</u>

With respect to geographic information, revenues are attributed to respective geographies based on the contracting address of the customer. Revenues from external customers attributed to the United Kingdom were 10.8% of total revenue for the year ended December 31, 2014. There were no individual foreign countries from which more than 10% of our total revenues were attributable for the years ended December 31, 2015 and 2016. Substantially all of our long-lived assets were held in the United States as of December 31, 2015 and 2016.

## **12. Retirement Plans**

We have a defined contribution 401(k) retirement and savings plan (the "401(k) Plan") to provide retirement benefits for all eligible employees. All employees who have completed forty-five days of service and are at least

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twenty-one years of age are eligible to participate in the 401(k) Plan. The 401(k) Plan allows eligible employees to make salary-deferred contributions up to 75% of their annual compensation, as defined, and subject to certain Internal Revenue Service limitations. Employer contributions vest at 25% per year, over four years. For the years ending December 31, 2014, 2015 and 2016, we incurred \$1.3 million, \$1.9 million and \$2.6 million, respectively, in contribution expense related to the employer matching contributions.

We are obligated to make plan contributions for the employees of certain of our wholly-owned foreign subsidiaries. For the years ending December 31, 2014, 2015 and 2016, we incurred \$0.3 million, \$0.5 million and \$0.7 million, respectively, in contribution expense related to our foreign subsidiaries.

### **13. Subsequent Events**

We have evaluated subsequent events through February 17, 2017, which is the date that the consolidated financial statements were available to be issued.

On January 31, 2017, our board of directors approved stock option grants under the Plan to purchase an aggregate of 249,700 shares of common stock at an exercise price of \$11.17 per share.

In connection with the completion of our IPO, we will incur stock-based compensation expense due to the performance condition associated with our stock options becoming probable. Including the impact of the stock options granted on January 31, 2017, the cumulative stock-based compensation expense to be recognized upon the pricing of our IPO is expected to be in the range of \$6.1 million to \$6.4 million.

# Appian

The Digital Transformation Platform.™



**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the Class A common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee, the Financial Industry Regulatory Authority, or FINRA, filing fee and the exchange listing fee.

	<u>Amount to be Paid</u>
SEC registration fee	\$ *
FINRA filing fee	*
initial listing fee	*
Blue sky fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous fees and expenses	*
Total	<u>\$ *</u>

\* To be filed by amendment.

**Item 14. Indemnification of Directors and Officers.**

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, (A) our amended and restated certificate of incorporation will provide that we are authorized to indemnify our directors and officers (and any other persons whom applicable law permits) to the fullest extent permitted by Delaware law and (B) our amended and restated bylaws will provide that: (1) we are required to indemnify our directors and executive officers to the fullest

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extent permitted by the Delaware General Corporation Law; (2) we may, in our discretion, indemnify our other officers, employees and agents as set forth in the Delaware General Corporation Law; (3) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors and executive officers in connection with certain legal proceedings; (4) the rights conferred in the bylaws are not exclusive; (5) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and (6) we may secure insurance on behalf of any director, officer, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law.

Our policy is to enter into agreements with our directors and executive officers that require us to indemnify them against expenses, judgments, fines, settlements and other amounts that any such person becomes legally obligated to pay (including with respect to a derivative action) in connection with any proceeding, whether actual or threatened, to which such person may be made a party by reason of the fact that such person is or was a director or officer of us or any of our affiliates, provided such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests. These indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. At present, no litigation or proceeding is pending that involves any of our directors or officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In addition, the underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, or otherwise. Our amended and restated investors' rights agreement with certain stockholders also provides for cross-indemnification in connection with the registration of our common stock on behalf of such investors.

See the undertakings set forth in response to Item 17 herein.

### **Item 15. *Recent Sales of Unregistered Securities.***

The following list sets forth information regarding all unregistered securities issued by us since January 1, 2014 through the date of the prospectus that is a part of this registration statement:

#### ***Issuances of Options to Purchase Common Stock***

From January 1, 2014 through the date of this registration statement, we granted under our 2007 Plan options to purchase an aggregate of 4,257,280 shares of our common stock to a total of 786 employees, consultants and directors, having exercise prices ranging from \$3.67 to \$11.17 per share. None of these options have been exercised.

The offers, sales and issuances of the securities described in the preceding paragraph were deemed to be exempt from registration either under Rule 701 promulgated under the Securities Act, or Rule 701, in that the transactions were under compensatory benefit plans and contracts relating to compensation, or under Section 4(a)(2) of the Securities Act in that the transactions were between an issuer and members of its senior executive management and did not involve any public offering within the meaning of Section 4(a)(2). The recipients of such securities were our employees, directors or consultants and received the securities under our equity incentive plans. Appropriate legends were affixed to the securities issued in these transactions.

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### ***Issuances of Preferred Stock***

In February 2014, we issued an aggregate of 6,120,050 shares of our Series B preferred stock to three accredited investors at a per share price of \$6.1274, for aggregate consideration of approximately \$37.5 million.

The offers, sales and issuances of the securities described in the preceding paragraph were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act or Rule 506 of Regulation D promulgated thereunder as a transaction by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was either an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act or had adequate access, through employment, business or other relationships, to information about us.

### **Item 16. *Exhibits and Financial Statement Schedules.***

#### ***(a) Exhibits***

The exhibits to this registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

#### ***(b) Financial Statement Schedules***

No financial statement schedules are provided because the information called for is not required or is shown either in the consolidated financial statements or related notes, which are incorporated herein by reference.

### **Item 17. *Undertakings.***

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification by the registrant for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Reston, Virginia, on the \_\_\_\_\_ day of \_\_\_\_\_, 2017.

**APPIAN CORPORATION**

By: \_\_\_\_\_  
**Matthew Calkins**  
**Chief Executive Officer and Chairman of the Board**

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Matthew Calkins, Mark Lynch and Christopher Winters, and each of them, his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (1) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (2) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (3) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (4) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
_____ Matthew Calkins	Chief Executive Officer and Chairman of the Board <i>(Principal Executive Officer)</i>	, 2017
_____ Mark Lynch	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	, 2017
_____ Robert C. Kramer	General Manager and Director	, 2017
_____ A.G.W. "Jack" Biddle, III	Director	, 2017
_____ Prashanth "PV" Boccassam	Director	, 2017
_____ Michael G. Devine	Director	, 2017

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
_____ Barbara "Bobbie" Kilberg	Director	, 2017
_____ Michael J. Mulligan	Director	, 2017

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Description of Document</b>
1.1†	Form of Underwriting Agreement.
3.1†	Amended and Restated Certificate of Incorporation of Appian Corporation, as amended and as currently in effect.
3.2†	Form of Amended and Restated Certificate of Incorporation of Appian Corporation to be effective upon closing of this offering.
3.3†	Bylaws of Appian Corporation, as amended and as currently in effect.
3.4†	Form of Amended and Restated Bylaws of Appian Corporation to be effective upon closing of this offering.
4.1†	Form of Class A common stock certificate of Appian Corporation.
4.2†	Amended and Restated Investors' Rights Agreement by and among Appian Corporation and certain of its stockholders, dated February 21, 2014.
5.1†	Opinion of Cooley LLP.
10.1+†	2007 Stock Option Plan and Form of Option Agreement and Exercise Notice thereunder, as amended to date.
10.2+†	2017 Equity Incentive Plan and Forms of Stock Option Agreement, Notice of Exercise and Stock Option Grant Notice thereunder.
10.3+†	Non-Employee Director Compensation Plan to be in effect upon the closing of this offering.
10.4+†	Form of Indemnification Agreement by and between Appian Corporation and each of its directors and executive officers.
10.5+†	Employment Agreement, dated as of September 7, 2012, by and between Appian Corporation and Matthew Calkins.
10.6+†	Employment Agreement, dated as of September 8, 2009, by and between Appian Corporation and Edward Hughes.
10.7+†	Amended and Restated Employment Agreement, dated as of _____, 2017 by and between Appian Corporation and Mark Lynch.
10.8+†	Amended and Restated Employment Agreement, dated as of _____, 2017 by and between Appian Corporation and Christopher Winters.
10.9+†	Employment Agreement, dated as of September 7, 2012, by and between Appian Corporation and Robert C. Kramer.
10.10†	Sublease Agreement, dated as of December 10, 2013, by and between Appian Corporation and College Entrance Examination Board, as amended to date.
10.11†	Amended and Restated Loan and Security Agreement, dated as of March 13, 2016, by and between Appian Corporation and Silicon Valley Bank, as amended.
10.12*#	Software Enterprise OEM License Agreement, dated as of June 15, 2016, by and between Appian Corporation and Kx Systems, Inc.
21.1†	Subsidiaries of Appian Corporation.
23.1†	Consent of BDO USA, LLP, independent registered public accounting firm.
23.2†	Consent of Cooley LLP (included in Exhibit 5.1).
24.1†	Power of Attorney. Reference is made to the signature page hereto.
99.1	Forrester Research Inc. Consent.
99.2	LTM Research Consent.

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† To be filed by amendment.

\* Previously filed.

+ Indicates management contract or compensatory plan.

# Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and have been separately filed with the Securities and Exchange Commission.

April 24, 2017

To Whom It May Concern:

Forrester Research, Inc. (“Forrester”) consents to the inclusion of its name and the language set forth below in the Registration Statement on Form S-1 filed by Appian Corporation and any related prospectus:

**Quotes 1 & 2: *According to Forrester, the market for low-code development platforms is expected to total \$3.9 billion in 2017 and is expected to grow at a 59% compound annual growth rate to \$15.5 billion in 2020. We were included as a “Leader” in the Forrester Wave: Low-Code Development Platforms in 2016, which is an evaluation of current offering, strategy and market presence.***

Source: Forrester, Vendor Landscape: The Fractured, Fertile Terrain Of Low-Code Application Platforms January 15, Updated April 11, 2016 (page 16, Figure 5) and The Forrester Wave™: Low-Code Development Platforms, Q2 2016 April 14, 2016

**Quote 3: *“Case management. We were included as a “Leader” based on the strength of our current offering, our strategy and our market presence in the Forrester Wave: Dynamic Case Management in 2016.”***

Source: Forrester, The Forrester Wave™: Dynamic Case Management, Q1 2016, February 2, 2016

**Quote 4: *“Traditional custom enterprise software market. In addition to our current core software markets, we believe that our platform better meets certain of the needs that have been historically addressed by manually-developed custom enterprise software, which is expected to represent a \$148 billion market in 2017, according to Forrester.”***

Source: Forrester, The Global Tech Market Outlook For 2017 To 2018 Updated January 12, 2017 (page 28, Figure 10-2)

**Quote 5: *“This competitive differentiation is of utmost importance as 59% of enterprise IT respondents cited the desire to gain required functionality as the main motivation for developing custom enterprise software, which is not available in purchased packaged software, according to a 2014 study conducted by Forrester Consulting, which was commissioned by us.”***

Source: The Move Toward Modern Application Platforms, a commissioned study conducted by Forrester Consulting on behalf of Appian, December 2014

**Quote 6: *“According to one example cited by Forrester, the coding of custom software took an estimated 2.7 years to complete,”***

Source: Vendor Landscape: The Fractured, Fertile Terrain Of Low-Code Application Platforms, April 11, 2016

**Quote 7: *“In the same report, Forrester found that the use of low-code software development was six to 20 times faster than traditional software development.”***

Source: Vendor Landscape: The Fractured, Fertile Terrain Of Low-Code Application Platforms, April 11, 2016

**Quote 8: *“Low-code platforms, like Appian, can accelerate developer speed by six to 20 times, according to use cases cited in a Forrester report.”***

Source: Vendor Landscape: The Fractured, Fertile Terrain Of Low-Code Application Platforms, January 15, 2016 Updated April 11, 2016

This consent is conditioned upon the inclusion in the Registration Statement and any related prospectus of the following language:

“The Forrester Research studies described herein represent data, research, opinions or viewpoints prepared by Forrester Research and are not representations of fact. We have been advised by Forrester Research that its studies speak as of their original dates (and not as of the date of this prospectus) and any opinions expressed in the studies are subject to change without notice.”

Forrester’s consent shall not be deemed an admission that Forrester is an expert whose consent is required under Section 7 of the Securities Act of 1933.

Very truly yours,

Forrester Research, Inc.

/s/ Naomi Y. Sager

Name: Naomi Sager

Title: Manager, Citations

April 17, 2017

Appian Corporation  
11955 Democracy Drive, Suite 1700  
Reston, VA 20190

Dear Sirs:

We, Lead to Market Research (“LTM Research”), a Division of Unee Solutions, hereby consent to the filing with the Securities and Exchange Commission of a Registration Statement on Form S-1, and any amendments thereto (the “*Registration Statement*”) of Appian Corporation and any related prospectuses of (i) our name and all references thereto, and (ii) the statements set out in the Schedule hereto. We also hereby consent to the filing of this letter as an exhibit to the Registration Statement.

We further consent to the reference to our firm, under the caption “Industry and Market Data” in the Registration Statement, as acting in the capacity of an author of independent industry publications.

Yours faithfully,

/s/ James M. Stafford, III

Name: James M. Stafford, III  
Designation: Project Manager  
For and on behalf of LTM Research

## SCHEDULE

Quote 1: *“Decision makers are increasingly recognizing the need to capitalize on these trends, with 87% of Global 2000 executives planning digital transformation projects for 2017 and 47% of Global 2000 executives citing digital transformation as their highest corporate priority for 2017, according to a survey conducted by LTM Research, an industry research firm, which was commissioned by us.”*

Quote 2: *“Developer talent is scarce and hiring developers to create custom software is costly. According to an LTM Research survey of Global 2000 executives, which was commissioned by us, 79% of respondents said they were concerned that their digital transformation initiatives would be impacted by challenges in hiring and retaining skilled developers.”*