Five9, Inc.
Form 10-K
February 25, 2019
Table of Contents

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

FORM 10-K

(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number: 001-36383

Five9, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	94- 3394123
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

Bishop Ranch 8
4000 Executive Parkway, Suite 400
San Ramon, CA 94583
(Address of Principal Executive Offices) (Zip Code)
(925) 201-2000
(Registrant's Telephone Number, Including Area Code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	The NASDAQ Global Market

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes: x No: o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes: o No: x
Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes: x No: o
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes: x No: o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated

filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	x	Accelerated Filer	o
Non-accelerated filer	o (Do not check if a smaller reporting Company)	Smaller Reporting Company	o
		Emerging growth company	o

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

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

The aggregate market value of registrant's common stock held by non-affiliates of the registrant based upon the closing sale price on the NASDAQ Global Market on June 30, 2018, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately $1,526.5 million. Shares held by each executive officer, director and their affiliated holders and by each other person (if any) who owns 10% of the outstanding common stock or more have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 15, 2019, there were 59,253,048 shares of the Registrant's common stock, par value $0.001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2019 Annual Stockholders' Meeting, which the registrant expects to file with the Securities and Exchange Commission within 120 days of December 31, 2018, are incorporated by reference into Part III (Items 10, 11,12, 13 and 14) of this Annual Report on Form 10-K.

Table of Contents

FIVE9, INC.
FORM 10-K
TABLE OF CONTENTS

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	2
PART I	
ITEM 1. Business	4
ITEM 1A. Risk Factors	16
ITEM 1B. Unresolved Staff Comments	45
ITEM 2. Properties	45
ITEM 3. Legal Proceedings	45
ITEM 4. Mine Safety Disclosures	45
PART II	
ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	46
ITEM 6. Selected Financial Data	47
ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	49
Overview	49
Key Operating and Financial Performance Metrics	50
Key Components of Our Results of Operations	52
Results of Operations For the Years Ended December 31, 2018, 2017 and 2016	53
Liquidity and Capital Resources	57
Critical Accounting Policies and Estimates	59
Off Balance Sheet Arrangements	60
Contractual Obligations	60
ITEM 7A. Quantitative and Qualitative Disclosure About Market Risk	62
ITEM 8. Financial Statements and Supplementary Data	64
ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	100
ITEM 9A. Controls and Procedures	100
ITEM 9B. Other Information	101
PART III	
ITEM 10. Directors, Executive Officers and Corporate Governance	102
ITEM 11. Executive Compensation	102
ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	102
ITEM 13. Certain Relationships and Related Transactions, and Director Independence	102
ITEM 14. Principal Accountant Fees and Services	102
PART IV	
ITEM 15. Exhibits and Financial Statement Schedules	103
Signatures	107

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which involve substantial risks and uncertainties. These statements reflect the current views of our senior management with respect to future events and our financial performance. These forward-looking statements include statements with respect to our business, expenses, strategies, losses, growth plans, product and client initiatives, market growth projections, and our industry. Statements that include the words “expect,” “intend,” “plan,” “believe,” “project,” “forecast,” “estimate,” “may,” “should,” “ar similar statements of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise.

Forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause our actual results to differ materially from those indicated in these statements. These factors include the information set forth under the caption “Risk Factors” and elsewhere in this report, and include the following:

- our quarterly and annual results may fluctuate significantly, including as a result of the timing and success of new product and feature introductions by us, may not fully reflect the underlying performance of our business and may result in decreases in the price of our common stock;
- if we are unable to attract new clients or sell additional services and functionality to our existing clients, our revenue and revenue growth will be harmed;
- our recent rapid growth may not be indicative of our future growth, and even if we continue to grow rapidly, we may fail to manage our growth effectively;
- failure to adequately expand our sales force could impede our growth;
- if we fail to manage our technical operations infrastructure, our existing clients may experience service outages, our new clients may experience delays in the deployment of our solution and we could be subject to, among other things, claims for credits or damages;
- security breaches and improper access to or disclosure of our data or our clients’ data, or other cyber attacks on our systems, could result in litigation and regulatory risk, harm our reputation and adversely affect our business;
- the markets in which we participate involve numerous competitors and are highly competitive, and if we do not compete effectively, our operating results could be harmed;
- if our existing clients terminate their subscriptions or reduce their subscriptions and related usage, our revenues and gross margins will be harmed and we will be required to spend more money to grow our client base;
- our growth depends in part on the success of our strategic relationships with third parties and our failure to successfully grow and manage these relationships could harm our business;
- we have established, and are continuing to increase, our network of master agents and resellers to sell our solution; our failure to effectively develop, manage, and maintain this network could materially harm our revenues;
- we sell our solution to larger organizations that require longer sales and implementation cycles and often demand more configuration and integration services or customized features and functions that we may not offer, any of which could delay or prevent these sales and harm our growth rates, business and operating results;
- because a significant percentage of our revenue is derived from existing clients, downturns or upturns in new sales will not be immediately reflected in our operating results and may be difficult to discern;
- we rely on third-party telecommunications and internet service providers to provide our clients and their customers with telecommunication services and connectivity to our cloud contact center software and any failure by these service providers to provide reliable services could cause us to lose clients and subject us to claims for credits or damages, among other things;
- we have a history of losses and we may be unable to achieve or sustain profitability;
- the contact center software solutions market is subject to rapid technological change, and we must develop and sell incremental and new products in order to maintain and grow our business;
- we may not be able to secure additional financing on favorable terms, or at all, to meet our future capital needs;

Table of Contents

- failure to comply with laws and regulations could harm our business and our reputation; and
- we may not have sufficient cash to service our convertible senior notes and repay such notes, if required.

The foregoing factors should not be construed as exhaustive and should be read together with the other cautionary statements included in this report. If one or more of these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, our actual results may differ materially from what we anticipate. You should not place undue reliance on our forward-looking statements. Any forward-looking statements you read in this report reflect our views only as of the date of this report with respect to future events and are subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, growth strategy and liquidity. We undertake no obligation to update any forward-looking statements made in this report to reflect events or circumstances after the date of this report or to reflect new information or the occurrence of unanticipated events, except as required by law.

Table of Contents

PART I

ITEM 1. Business

Overview

Five9 is a pioneer and leading provider of cloud software for contact centers. Since our inception, we have exclusively focused on delivering our platform in the cloud and are disrupting a significantly large market by replacing legacy on-premise contact center systems. Contact centers are vital hubs of interaction between organizations and their customers and, therefore, are essential to delivering successful customer service, sales and marketing strategies. Our mission is to empower organizations to transform their contact centers into customer engagement centers of excellence, while improving business agility and significantly lowering the cost and complexity of their contact center operations. Our purpose-built, highly scalable and secure Virtual Contact Center, or VCC, cloud platform delivers a comprehensive suite of easy-to-use applications that enable the breadth of contact center-related customer service, sales and marketing functions. We have become an established leader in the cloud contact center market, facilitating more than five billion call minutes between our more than 2,000 clients and their customers per year. We believe our ability to combine software and telephony into a single unified platform that is delivered in the cloud creates a significant advantage.

Based on our current product offering and historical average annual recurring revenue per seat, we believe that the market for our solution is approximately $24 billion annually worldwide. Gartner, Inc., or Gartner, estimated that there are approximately 15.8 million contact center agents worldwide. Furthermore, we believe cloud penetration of the contact center market in North America is between 10% to 15%. We believe adoption of cloud contact center software solutions is increasing rapidly as a result of several distinct trends. The increasing adoption of cloud computing, especially within customer relationship management, or CRM, is creating strong demand for integrated cloud contact center software solutions. In addition, cloud contact center software solutions now offer the functionality required by large, complex enterprise contact centers. Furthermore, we believe organizations typically refresh their contact center systems every 8 to 10 years, which provides an opportunity for cloud solutions to replace legacy on-premise contact center systems when these replacement decisions arise. On-premise systems require large up-front investments, long deployment cycles and are burdensome to maintain. These systems are also often inflexible, complex, and require significant duplication of effort and integration across multiple sites. This creates substantial challenges for clients with on-premise contact center systems to implement new features or upgrades, or to integrate with adjacent cloud solutions. As a result, cloud contact center software solutions are replacing legacy on-premise contact center systems.

Our solution, which is comprised of our Virtual Contact Center, or VCC, cloud platform and applications, allows simultaneous management and optimization of customer interactions across voice, chat, email, web, social media and mobile channels, either directly or through our application programming interfaces, or APIs. Our VCC cloud platform matches each customer interaction with an appropriate agent resource and delivers relevant customer data to the agent in real-time through integrations with adjacent enterprise applications, such as CRM software, to optimize the customer experience and improve agent productivity. Our solution ensures our clients always have the latest version of our software. Delivered on-demand, our solution enables our clients to quickly deploy agent seats in any geographic location with only a computer, headset and broadband internet connection, and rapidly adjust the number of contact center agent seats in response to changing business requirements. Unlike legacy on-premise contact center systems, our solution requires minimal up-front investment, can be rapidly deployed and is maintained by us in the cloud.

Our sales model consists of a field sales team that sells our solution into larger opportunities and a telesales team that sells our solution into smaller opportunities. We have developed a proven, high velocity, metrics-driven sales and marketing strategy, which is designed to effectively identify, qualify and close sales opportunities. To complement this go-to-market strategy, we have developed a large ecosystem of technology and system integrator partners and independent software vendors to help increase awareness of our solution in the market and drive incremental sales opportunities with new and existing clients. We have also established, and are continuing to increase, our network of master sales agents, which provide sales leads and resellers that sell our solution to new and existing clients. This network has helped us attract additional clients. Our resellers have assisted us, and we expect they will continue to

assist us, in expanding internationally.

Table of Contents

We provide our solution through a software-as-a-service, or SaaS, business model with recurring subscriptions based primarily on the number of agent seats and minutes of usage, as well as the specific functionalities and applications our clients deploy.

We have achieved significant growth in recent periods. For the years ended December 31, 2018, 2017 and 2016, our revenues were $257.7 million, $200.2 million and $162.1 million, respectively, representing year-over-year growth of 29% and 24%, respectively. We incurred net losses of $0.2 million, $9.0 million and $11.9 million for the years ended December 31, 2018, 2017 and 2016, respectively, as a result of increased investment in our growth. As of December 31, 2018, 2017 and 2016, our total assets were $394.7 million, $128.2 million and $105.2 million, respectively. Our recurring revenue model combined with our Annual Dollar-Based Retention Rate, which was 103% as of December 31, 2018, have enhanced our ability to forecast our financial performance and plan future investments. For a description of how our Annual Dollar-Based Retention Rate is calculated, please refer to ITEM 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II of this Annual Report on Form 10-K.

We operate in a single reportable segment. Please refer to the geographical information for each of the last three years in Note 11 of the notes to our consolidated financial statements. Please refer to the discussion of risks related to our foreign operations in the section entitled “ITEM 1A. Risk Factors.”

Industry Overview

Contact centers must evolve in today’s rapidly changing technology environment

Contact centers are vital hubs of interaction between organizations and their customers and are mission critical to the successful execution of customer service, sales and marketing strategies. Both consumer and enterprise technology trends are driving an evolution in contact center strategies. Today, customers increasingly expect seamless communications across multiple channels, including voice, chat, email, web, social media and mobile, thereby increasing the number of touch points between organizations and their customers. Along with these additional channels, customers expect personalized interactions to enhance overall customer service. Delivering customer interactions to an appropriate agent resource, while delivering relevant customer data to the agent in real-time, is crucial in providing effective customer service.

As the needs of organizations and their customers have become more sophisticated, so have the demands for contact centers. Striving for greater efficiency in meeting demand, the use of remote agents and geographically dispersed contact centers has proliferated. To increase capacity and undertake upgrades, on-premise contact centers must unify geographically dispersed agents and hardware, which requires building out teams and facilities to forecasted future capacity and is a long-term undertaking. In order to meet these changing demands, contact centers must upgrade their existing on-premise contact center systems or migrate their contact center operations to the cloud.

Legacy on-premise contact center systems are inefficient

The majority of contact center operations today rely on legacy on-premise contact center systems that include business workflows, as well as hardware and software architectures designed more than a decade ago. Legacy on-premise contact center systems are typically developed for location-specific deployments and are often costly, inflexible, complex and require significant duplication of effort and integration across multiple sites. Key shortcomings of these legacy systems include:

- Long and complex implementation and upgrade cycles. Implementation of legacy on-premise contact center systems requires long deployment timelines and complex integrations with other enterprise systems. Once these systems have been deployed, integrated and customized, upgrades and modifications can be extremely challenging. Due to these customized solutions and complex integrations, clients will often forego or postpone upgrades for fear of disabling key functionality. If they do choose to upgrade, clients are often required to rebuild integrations in order to retain full functionality, which frequently results in significant expenditures of time, resources and capital.
- Inflexible resource deployment. As organizations expand globally, they require the ability to easily manage remote agents and quickly adjust agent seats to accommodate peak call volumes. Most legacy on-premise contact center systems do not provide these capabilities and, as a result, their clients are typically unable to quickly scale their contact center operations in response to changing business needs. This often results in costly over-building of additional capacity to accommodate peak volumes.

5

Table of Contents

- Duplicative technology stacks across multiple sites. Organizations must integrate multiple contact center sites to drive efficiency and create a unified customer view. Organizations running on-premise systems often find themselves with dissimilar systems at each site resulting in non-integrated and inefficient silos of technology. Moreover, technology at each site is in a constant state of change over time. The initial and ongoing integration of these contact center sites for such organizations requires significant ongoing investment.

Our Opportunity

Based on our current product offerings and historical average annual recurring revenue per seat, we believe that the market for our solution is approximately $24 billion annually worldwide. Gartner estimated that there are approximately 15.8 million contact center agents worldwide. Furthermore, we believe cloud penetration of the contact center market in North America is between 10% to 15%. We believe the market for contact center solutions is undergoing a significant shift to the cloud driven primarily by:

- adoption of cloud CRM solutions;
- sophistication of cloud contact center software solutions;
- technology refresh of on-premise contact center systems; and
- simplicity of the cloud vs. complexity of legacy on-premise.

Adoption of cloud CRM solutions has grown as organizations seek to enhance their sales strategies, increase business agility and reduce costs. CRM solutions typically integrate deeply with contact center solutions to provide agents with real-time access to customer information. The shift to cloud CRM and ease of integration are creating significant demand for integrated cloud contact center software solutions. As the market opportunity has expanded, cloud contact center software solutions have evolved to meet the requirements of large, complex enterprise contact centers. We believe organizations have typically refreshed their on-premise contact center systems every 8 to 10 years. Given the prevalence of cloud CRM and the capabilities of cloud-based contact centers, cloud solutions are increasingly considered as a replacement alternative to legacy on-premise contact center systems during these refresh decisions.

Our Solution

We deliver a comprehensive, end to end cloud software solution for contact centers. Our solution enables organizations of all sizes to enhance customer experience through omnichannel engagement, improve customer service, increase sales performance and improve the efficiency and cost of their operations. Our solution is designed to enable customers to seamlessly engage through voice, video, website, mobile, chat, email, click-to-call, callback, social and messaging. Our agent interface is an intuitive modern browser-based design providing easy visualization of customer profile, context and cross channel history. Our Freedom platform provides a modern micro services-based open enterprise architecture built with representational state transfer, or REST, API's and powerful software development kits, or SDKs, enabling customers, partners and developers to deliver powerful solutions that bridge the context gap between their unique systems. We provide high voice quality with our Agent Connect service and our call-by-call carrier optimization routing. With our "Genius" Artificial Intelligence, or AI, enablement layer, combined with our robust Natural Language Processing, or NLP, we can determine customer sentiment, reason for contact and recommend the next best action, enabling enterprises to transform their customer's experience from reactive interactions into trusted, proactive engagements. Our complete end-to-end capabilities include computer-telephony integration, or CTI, interactive voice response, or IVR, visual IVR, automatic contact distribution, or ACD, with skills-based routing, reporting, dashboards, agent and supervisor desktop, dialer, mobile applications for contact center and customer, pre-built CRM integrations, quality management, speech and desktop analytics, customer surveys and workforce management.

Our cloud contact center solution, which we refer to as our solution, provides the following key elements:

- Rapid implementation, seamless updates and pre-built integrations. Our solution is designed to be deployed quickly and seamlessly with minimal disruption to a client's operations. The pre-built integrations with leading CRM and other enterprise applications reduce the complexity and burden-of-effort of integrating with the client's business applications. Our solution is designed to be seamlessly updated so that clients are always on the latest version of the software, while maintaining their existing configurations, ensuring minimal disruption to the client's contact center operations.

6

Table of Contents

- Highly flexible platform. Our solution provides easy administration, configuration and role-based functionalities for agents, supervisors and administrators enabling the rapid adjustment of contact center resources to meet a changing mix of contact channels and peaks-and-troughs in contact volumes.
- Scalable, secure and reliable multi-tenant architecture. Our solution provides organizations of all sizes with the robust contact center functionality, scalability, flexibility and security required in the most sophisticated and distributed environments.

Our solution provides the following key benefits to clients:

- Higher agent productivity. Our solution empowers agent productivity and effectiveness by allowing agents to handle both inbound and outbound calls and interact with customers across multiple contact channels, including voice, chat, email, web, social media and mobile. Our solution gives agents the ability to switch between media channels through an easy-to-use, unified interface that provides agents with all of the relevant content and tools needed to complete the task at hand.
- Improved customer experience. Our intelligent contact routing and self-service IVR capabilities, pre-built CRM integrations, and multichannel engagement ensure that customers receive an omnichannel experience. Each new contact is quickly routed to an appropriate agent resource. Using the rich contact history and additional context through integrations with CRM applications, agents have immediate access to the most current, relevant and accurate information about the customer, resulting in increased first contact resolutions and a more satisfying experience for the customer.
- Enhanced end-to-end visibility. Our solution provides clients' operations staff, quality team and leadership with a complete view of contact center performance through a comprehensive set of historical reports, real-time dashboards, and quality and performance management tools. Clients can also extract reporting data from our solution for further analysis using a spreadsheet application or using the sophistication of an enterprise business intelligence application. This insight provides an organization-wide view of customer engagement performance and allows clients to quickly determine the appropriate actions required to address changing circumstances.
- Greater operational efficiency. Our solution provides contact center managers and supervisors with significant visibility into their agents' productivity and effectiveness and the performance of their inbound queues and outbound campaigns. Our solution has robust intelligence and analytics capabilities to help supervisors optimize operations and campaigns in real-time to drive increased efficiency. Our role-based interfaces deliver specific functionality to both desktops and mobile devices to meet the unique needs of agents, supervisors and administrators.
- Compelling value proposition. We provide a unified cloud-based software and telephony platform for contact center operations, including software applications, technology infrastructure, maintenance, monitoring, storage, security, client support and upgrades, which enables our clients to simplify their technology infrastructure and streamline IT costs. We manage upgrades and deployments remotely, resulting in lower total cost of operations relative to legacy on-premise contact center systems that often require in-house technical support staff.

Our Competitive Strengths

We believe that our position as a leading provider of cloud contact center software results from several key competitive strengths, including:

- Cloud-based, enterprise-grade platform and end-to-end application suite. We deliver a cloud-based enterprise-grade platform and applications suite with multi-channel capabilities that allows our clients to manage their entire contact center operation. Our highly scalable, secure and multi-tenant architecture enables us to serve large, distributed enterprises with complex contact center requirements, as well as smaller organizations, all from a single cloud platform.
- Rapid deployment and support of our comprehensive solution. Our high-touch engagement model for larger implementations leverages a proven lifecycle approach including detailed discovery, design, testing, training and optimization. This not only accelerates agent activation, but also targets desired business outcomes. Through the use of tools and processes that have been refined over thousands of customers, we can also efficiently meet the needs of our smaller clients. We offer flexibility and integrate with a number of leading CRM vendors, including: salesforce.com, Inc., or Salesforce, Oracle Corporation, or Oracle,

7

Table of Contents

Zendesk, Inc., or Zendesk, Microsoft Corporation, or Microsoft, ServiceNow, Inc., or ServiceNow, and others. Once operational, we offer a high touch Premium Support service where we assign a Technical Account Manager who has intimate knowledge of the customers' operations so we can quickly resolve issues and fine tune the solution. As a result, our clients' contact centers become fully operational faster and they recognize time to value more quickly than with legacy on-premise contact center systems.

- Reliable, secure, compliant and scalable platform. Our platform delivers what we believe is industry leading reliability; cybersecurity using a defense-in-depth approach; legal and regulatory compliance features designed to assist our clients in complying with applicable laws, regulations and industry standards including Telephone Consumer Protection Act, or TCPA, Customer Proprietary Network Information, or CPNI, Health Insurance Portability and Accountability Act of 1996, Communications Assistance for Law Enforcement Act, or CALEA, Gramm-Leach-Bliley Act, EU's General Data Protection Regulation, or GDPR, Canada's Personal Information Protection and Electronic Documents Act, or PIPEDA, and analogous provincial laws, and Payment Card Industry Data Security Standard, or PCI DSS, and is scalable to accommodate the requirements of larger clients.
- Proven, repeatable and scalable go-to-market model. We engage with our clients through a highly scalable and metrics-driven sales and marketing organization that effectively identifies, qualifies and closes sales opportunities. The deep domain expertise of our field sales team is instrumental in selling to larger opportunities, and our highly efficient telesales model enables us to cost-effectively identify, qualify and close a high volume of smaller opportunities. Our ecosystem of technology and system integrator partners increases awareness of our solution and helps generate new sales opportunities. We believe our go-to-market model gives us an efficient and effective means of targeting organizations of all sizes.
- Established market presence and a large, diverse client base. We have a large, diverse client base of over 2,000 organizations across multiple industries. We believe our clients view us as a key strategic solutions provider. The performance, reliability, ease-of-use and comprehensive nature of our solution has resulted in high client retention.
- Extensive partner ecosystem. We have cultivated a robust ecosystem of partners including a variety of leading CRM software vendors such as Salesforce, Oracle, Zendesk, Microsoft and ServiceNow; Workforce Optimization, or WFO, vendors such as Calabrio, Inc., or Calabrio, Verint Systems Inc., or Verint, and Coordinated Systems, Inc., or CSI; unified communications vendors such as Microsoft Teams (formerly Skype for Business), Fuze, and Cisco; system integrators such as Accenture PLC, Deloitte Consulting LLP and PwC LLP; master agents and resellers; cloud private branch exchange, or PBX, phone systems vendors; independent software vendors; and telephony providers such as AT&T Inc., Verizon Communications Inc. and CenturyLink Communications, LLC. We believe this ecosystem has enabled us to increase our brand awareness and enhance the functionality and value of our solution for our clients.
- Focus on innovation and thought leadership. Since our inception, we have been an innovator of cloud contact center software. Our investment in research and development has driven our growth and enabled us to deliver a cloud contact center software solution with the features and functionality to power the most complex contact centers. Our extensive domain expertise enables us to enhance our solution and serves as a critical competitive differentiator. We strive to be a thought leader in our industry, identifying and developing cloud capabilities to transform traditional contact center operations into customer engagement centers of excellence. One of the newest transformational technologies is AI. AI relies on vast volumes of data and contact centers are a rich source of this data, from call detail records, to full recordings of calls and customer interactions. With recent advances in automatic speech recognition, voice recordings have the potential to quickly become a source for training machine-learning models. We believe that AI is likely to have a profound impact in how businesses deliver service to their customers.

Our Growth Strategy

Our objective is to strengthen our position as a leader in cloud contact center software. To accomplish this goal, we are pursuing the following growth strategies:

- Capture increased market share. We believe that the adoption of cloud contact center software solutions is increasingly driven by mainstream adoption of cloud computing, especially within CRM, as well as the increasing capabilities of these solutions. With organizations refreshing their contact center systems every 8 to 10 years, cloud solutions have an opportunity to replace legacy on-premise contact center systems at the

8

Table of Contents

time a replacement decision is made. We believe there is a substantial opportunity for us to win new clients and increase our market share given the strength and client benefits of our cloud solution. We intend to continue to invest aggressively in our sales force and marketing capabilities to win new clients.

- Continue to increase sales in our existing client base. Many of our clients initially deploy our solution to support only a portion of their contact center agents. We intend to increase the number of agents using our solution within our existing clients as they experience the benefits of our cloud solution. We also intend to sell our existing clients incremental applications to increase our revenue and the value of our existing client relationships.
- Maintain our innovation leadership by strengthening and extending our solution. We have an innovative platform that has enabled us to establish a leadership position in the cloud contact center software market. To preserve and expand our leadership position, we intend to continue to make significant investments in research and development to strengthen our existing solution and develop additional industry-leading contact center features and applications. Facilitated by the Five9 "Genius" AI-enablement layer, we plan to provide our customers with innovative AI-powered applications and use-cases, including conversational virtual agents, agent assistance, business insights and AI-powered routing. We are designing our AI products to improve customer experiences and operational effectiveness while realizing potentially significant cost savings.
- Access to Data. As AI becomes increasingly important in the contact center market, access to data will become a key differentiator among vendors. Leading vendors processing a high number of customers interactions will have more data that can be applied to necessary training of machine learning algorithms, which creates a positive reinforcement cycle that we believe will enable customer contact solutions to be more effective.
- Further develop our partner ecosystem. We have established strong partner relationships with organizations in the contact center ecosystem to further enhance the value of our VCC cloud platform. We intend to continue to cultivate new relationships with additional CRM, WFO and unified communications partners as well as system integrators, master agents, resellers, PBX providers, phone systems vendors, independent software vendors and telephony providers to enhance the value of our solution and drive sales.
- Expand internationally. To date, our primary focus has been on the U.S. market, which represented 93%, 94% and 93% of our revenue in 2018, 2017 and 2016, respectively, based on bill to addresses. We believe there is a significant opportunity for our cloud solution to disrupt incumbent legacy on-premise contact center systems internationally. We plan to increase our sales capabilities internationally by expanding our direct sales force and working with channel partners to target these markets and grow our international client base. We have co-location data center facilities in Europe to provide clients in certain countries of the European Union, or EU, with regional access to our cloud contact center solution to better serve local needs.
- Selectively pursue acquisitions. In addition to organically developing and strengthening our solution, we intend to selectively explore acquisition opportunities of companies and technologies to expand the functionality of our solution, provide access to new clients or markets, or both.

Our Virtual Contact Center Cloud Platform and Applications

Our cloud contact center software solution consists of our highly scalable VCC cloud platform that delivers a comprehensive suite of easy-to-use, secure applications to cover the breadth of contact center-related customer service, sales and marketing functions. Our VCC cloud platform acts as the hub for omnichannel engagement between our clients and their customers. This enables clients to fully manage the end-to-end customer experience in a single unified architecture. Our solution enables our clients to manage customer interactions across multiple channels including voice, chat, email, web, video, social media and mobile and connects them to the most appropriate agent. Whether the resource is an internal contact center agent, an outsourcer, an agent working from home, a knowledge worker, or self-service, our solution enables our clients to deliver a highly effective customer experience.

Our solution is built using a multi-tenant architecture and delivered in the cloud. The following diagram illustrates our VCC cloud platform and comprehensive suite of applications used by agents, supervisors and administrators. In addition, we provide a robust set of management applications including workforce management, reporting, quality management and supervisor tools.

Table of Contents

Inbound Contact Center: With our VCC cloud platform, organizations of all sizes have everything they need to handle their inbound customer engagement. This includes the ability to take voice calls, respond to chat and email, and engage with a wide range of social media sources. Our platform includes a full-featured IVR system that allows our clients to provide a self-service capability and to automatically determine the customer intent and identify the type of resource to best handle the customer inquiry. At the center of our VCC cloud platform is the ACD module which provides intelligent routing of customer interactions. This enables clients to classify and prioritize customer interactions and ensure that the interactions are delivered to the most appropriate resource to provide the best customer experience and maximize business results.

Through CTI capabilities, out-of-the-box integrations with CRM solutions (such as Salesforce, Oracle, Zendesk, Microsoft and ServiceNow), and easy to use open APIs, clients can provide a personalized customer experience by prioritizing important customers and delivering customer information to the agent handling the interaction. This promotes quick first contact resolution, which is a key factor in delivering a superior customer experience.

Outbound Contact Center: Our Outbound Contact Center application enables our clients to improve the efficiency and productivity of outbound contact center agents. We provide a complete solution for outbound sales and marketing campaigns, including multiple automated dialing options, so our clients can find the right match for their needs and environment, whether outbound business-to-consumer, or B2C, business-to-business, B2B, or 1:1 proactive customer care. We provide a variety of outbound dialer modes, including a patented predictive dialer capability. The predictive dialer greatly enhances the productivity of agents and sales representatives by increasing productive talk time and minimizing idle time spent listening to voice mail and busy signals. These dialer solutions allow our clients to choose the automation capabilities that best align with their contact center environment and objectives, including lead prospecting, qualifying, nurturing and converting. We also provide campaign management tools such as list management, sophisticated dialer rules and agent scripting. In addition, we provide a manual touch mode option that provides tools to outbound clients to comply with the TCPA regulations.

Blended Contact Center: We provide both inbound and outbound capabilities on a single platform to unify contact center operations and enable end-to-end customer engagement. This improves agent productivity as interactions are automatically selected and routed to agents based on interaction volume. When inbound call volumes are low, the blending ability allows clients to shift inbound agent resources to outbound-related functions. For example, inbound agents can be assigned to the outbound queue for automatic follow-ups on any customer interaction, flag customer surveys for personalized attention, or resolve open customer issues.

Omnichannel Applications Powered by Five9: Our multichannel applications are powered by a unique set of technologies. These technologies include an advanced NLP engine to filter and categorize interactions, eliminate spam and determine sentiment. Based on a client’s unique set of business policies and needs, our solution provides simpler, smarter, and more productive omnichannel engagement by offering agents sentiment analysis, clustering, trending topics, and relevance. In addition, Five9 powers agent assistance tools to help agents resolve issues quickly.

Table of Contents

Five9 VCC integrates voice with chat, email, web, social media and mobile applications for a true omnichannel agent and customer experience.

- Five9 Social - Applies contact center customer service and sales best practices to social channels. Our solution routes, tracks and reports on agent performance in responding to social media posts in the same manner as other channels.
- Five9 Chat - Live consumer-to-agent chat from mobile or web devices gives agents the ability to respond, record and manage multiple chat interactions.
- Five9 Email - Makes email a high-response sales, service and support channel. Our email routing capability filters and intelligently routes email requests to enable the best qualified agents to respond in a timely manner.
- Five9 Visual IVR - Our visual IVR application provides mobile customer care for today's connected customers. It allows clients to develop an IVR script once and deploy it on multiple touchpoints, including mobile devices and websites.

Management Applications: Our integrated portfolio of management applications is built and delivered on our highly scalable and flexible VCC cloud platform. Our solution provides real-time supervisor tools to monitor and manage the performance of agents and call flows. We also provide a suite of configurable management reports to enable clients to manage the end-to-end performance of their contact center operations. For clients with high-end Workforce Optimization, or WFO, needs, our solution can provide fully integrated workforce and quality management applications through our strategic relationships with Calabrio, Verint and CSI. Our solution has native recording capabilities for contact centers that need to record their interactions.

Our clients can access our VCC cloud platform in five different ways:

- Agent Desktop: Serves as the unified environment for contact center agents. Agents are provided with one easy-to-use desktop that is designed to allow agents to seamlessly conduct omnichannel interactions. Our universal transaction model adjusts to the needs of the interaction, including voice, chat, email, web, social media or mobile, yet feels familiar to the agent, making training simple. Automated call scripting and real-time customer data, such as purchase and interaction history, is delivered to empower agents with the information they need to deliver a superior customer experience.
- CRM Integrations: For clients that prefer to have their agents or sales representatives work within their CRM desktop, we offer pre-built integrations with leading providers of CRM systems such as Salesforce, Oracle, Zendesk, Microsoft and ServiceNow. In addition, professional services can provide integrations with custom or legacy CRM systems. Our solution provides softphone and telephony capabilities within the CRM desktop, and routes each customer interaction to an appropriate agent resource. Agents are able to work within a familiar desktop, equipped with full telephony controls and giving them immediate access to the most current, relevant and accurate information about the customer.
- Supervisor Plus: Provides supervisors with a modern browser-based tool to optimize the contact center and ensure high quality customer interactions. This tool includes a visual supervisor dashboard that provides easy to use visibility into call routing, queues, service levels, workflow management, utilization, campaign statistics and agent productivity. A mobile tablet version of the supervisor application is also available to help supervisors monitor agents, listen in on conversations, coach agents, and oversee queues and agent performance metrics while on the contact center floor. These metrics typically include average handle time, first contact resolution, number of interactions handled and contact outcomes.
- Administrator: Provides administrators with a comprehensive set of integrated tools to easily configure agent skills (such as language, domain expertise, and media channels to service), determine interaction routing strategies, specify IVR scripts and manage the contact center operation. The Five9 Administrator system is easy to use so contact center business personnel can set up and make changes themselves, without having to rely on specialized IT staff often required to manage legacy on-premise contact center systems. This represents a key advantage of our VCC cloud platform as it allows businesses to adapt quickly to keep up with the rapid changes required in contact center operations.
- Reporting and Analytics: Real-time and historical reports provide statistics and key performance indicators to allow executives and supervisors to monitor the contact center, improve reaction time to interaction volume and manage agents more effectively. We provide more than 100 standard reports with multiple views

11

Table of Contents

and drill-downs into individual inbound calls and multichannel interaction metrics, customer interaction outcomes, and outbound sales and marketing program metrics. Our reporting module also enables clients to build customized reports and reporting schedules.

Experience Orchestration: The Five9 Engagement Workflow allows businesses to decide how customers can interact with the contact center. At the heart of Engagement Workflow is a powerful drag-and-drop workflow tool that is used to configure the customer experience. This is done using a set of pre-built and configurable modules; speech services such as automated speech recognition and text-to-speech synthesis; text services such as NLP; data services such as database query; customization services such as scripting; and real-time rules modules. The Five9 Genius AI-enablement layer is an integral part of Engagement Workflow, which allows AI technologies to be effectively applied to the delivery of experience to the customer.

Five9 Open Platform: We provide a comprehensive set of open APIs and SDKs that allow customers, developer partners, system integrators and independent software vendors to customize our application and to integrate complementary products with the Five9 solution. This open platform approach ensures that customers can have the confidence that the already high level of functionality we provide out-of-the-box can be further customized or enhanced to meet the specific needs of their business.

Clients

We have a large and diverse client base comprised of more than 2,000 organizations as of December 31, 2018, with no single client representing more than 10% of our revenues in 2018, 2017 or 2016. Our client base spans organizations of all sizes across multiple industries, including banking and financial services, business process outsourcers, consumer, healthcare and technology.

Sales

Our sales model consists of a field sales team that sells our solution into larger opportunities and a telesales team that sells our solution into smaller opportunities. We established our business targeting smaller opportunities and have expanded our sales focus to larger opportunities as we gained traction in the market and enhanced the capabilities of our cloud solution. We have developed a disciplined, high volume, metrics-driven sales strategy, designed to enable us to efficiently generate and close a large number of new sales opportunities. Our telesales team focuses on qualified leads generated through traffic to our websites, and also supports our field sales team through lead generation and lead-tracking activities. Our field and telesales teams are also responsible for selling to existing clients that may renew their subscriptions, increase the number of agents using our cloud solution, add new applications from our solution and expand the deployment of our solution across their contact centers.

Marketing

To build client awareness and adoption of our solution, our lead generation activities consist primarily of client referrals, search engine marketing, internet advertising, digital marketing campaigns, social media, trade shows, industry events, co-marketing with strategic partners and telemarketing. In addition, our industry analyst, press and media outreach programs, and web site marketing initiatives are designed to build brand awareness and preference for Five9. We offer free trials and services to allow prospective clients to experience the quality and ease-of-use of our cloud solution, to learn about the features and functionality of our VCC cloud platform in more detail, and to quantify the benefits of our cloud solution.

To complement our sales and marketing efforts, we have developed a large ecosystem of software, technology, telephony and system integrator partners and independent software vendors who help increase awareness of our solution and generate new and installed base sales opportunities.

Research and Development

Our ability to compete depends in large part on our continuous commitment to research and development and our ability to improve the functionality of, and add new features to, our VCC cloud platform. Our core research and development center is based in our San Ramon, California headquarters with additional engineers located in Russia, which allows us to benefit from relatively low-cost and highly skilled software developers. Our engineering team has deep software and telecommunications skills, and works closely with our sales team to identify our clients' product requirements. In addition, continuous interactions with our partners enable our engineers to enhance the usability and performance of our platform and its integration with best-in-class CRM and other business applications and telephony

technologies.

Table of Contents

As of December 31, 2018, we had 204 employees in our research and development group. Our research and development expenses totaled $34.2 million, $27.1 million and $23.9 million for the years ended December 31, 2018, 2017 and 2016, respectively. We intend to increase our rate of research and development spending in 2019 to continue to deliver robust functionality to our clients.

Professional Services

We offer comprehensive professional services to our clients to assist in the successful implementation and optimization of our solution. Our professional services include application configuration, system integration, and education and training. Our clients may use our professional services team for implementing our solution or, in limited cases, they may also choose to perform these services themselves or engage third-party service providers to perform such services. Our cloud solution allows us to eliminate the need for lengthy and complex technology integrations, such as deploying equipment or maintaining hardware infrastructure for individual clients. As a result, we are typically able to deploy and optimize our solution in significantly less time than required for deployments of legacy on-premise contact center systems.

Technology and Operations

Our highly scalable and flexible VCC cloud platform is the result of more than 16 years of research, development, client engagement and operational experience. The platform is comprised of in-house developed intellectual property, open source products and commercially available hardware and software. The platform is designed to be redundant and we believe that all components can be upgraded, expanded or replaced with minimal or no interruption in service. We currently deliver our services globally from four third-party co-location data center facilities located in Santa Clara, California; Atlanta, Georgia; Slough, England and Amsterdam, the Netherlands. We also deliver some services using public cloud infrastructure and plan to increase our use of public cloud infrastructure over time. Our infrastructure, including our third-party co-location facilities, is designed to support real-time mission-critical telecommunications, applications and operational support systems. Our infrastructure is built with redundant, fault-tolerant components divided into distinct security zones forming protective layers for our applications and customer data.

We have designed and maintain an operations, capacity and security program to monitor and maintain our platform, ensure efficient utilization of the platform capacity and protect against security threats or data breaches. Our operations team monitors our data centers for potential performance issues, unauthorized attempts to access secure data or applications and the overall integrity of the platform.

Competition

The market for contact center software is fragmented, highly competitive and evolving rapidly in response to shifting consumer behavior, especially the rapid adoption of mobile devices and social media. The proliferation of each is driving change in contact center technology, as customers expect companies to give them the option of seamless communication across any channel according to their preference and needs. Combined with the disruptive nature of the cloud in the contact center, this has resulted in competitors who come from different market and product heritages, and who vary in size, breadth and scope of the products and services offered. We currently compete with large legacy on-premise contact center system vendors that offer on-premise enterprise telephony and contact center systems, such as Avaya Inc., or Avaya, and Cisco Systems, Inc., or Cisco, and legacy on-premise software companies that come from a CTI heritage, such as Aspect Software, Inc., or Aspect, and Genesys Telecommunications Laboratories, Inc., or Genesys (including through its acquisition of Interactive Intelligence Group, Inc., or Interactive Intelligence). These legacy technology and software companies are increasingly expanding their traditional on-premise contact center systems with competing cloud offerings, either through acquisitions or in-house development. Additionally, we compete with vendors that historically provided other contact center services and technologies and expanded to offer cloud contact center software. These companies include inContact, Inc. (acquired by NICE Ltd.), and Seranova, which previously was named LiveOps, Inc., or LiveOps. We also face competition from smaller contact center service providers with specialized contact center software offerings and from larger companies that have recently introduced products that compete with ours. For example, Amazon.com, Inc., or Amazon, and Twilio Inc., or Twilio, have introduced solutions aimed at companies who wish to build their own contact centers with in-house developers. Our actual and potential competitors may enjoy competitive advantages over us, including greater name recognition,

longer operating histories, larger

Table of Contents

marketing budgets and greater financial and technical resources. We believe the principal competitive factors in our market include:

- breadth and depth of solution features;
- reliability, scalability and quality of the platform;
- ease and speed of deployment;
- ease of application administration and use;
- level of client satisfaction;
- domain expertise in contact center operations;
- integration with third-party applications;
- ability to quickly adapt and upgrade to new and evolving technologies;
- pricing;
- ability to quickly adjust agent seats based on business requirements;
- breadth and domain expertise of the sales, marketing and support organization;
- ability to keep pace with client requirements;
- extent and efficiency of our professional services;
- ability to offer multiple channels of engagement; and
- size and financial stability of operations.

We believe we currently compete effectively with respect to each of the factors identified above.

Intellectual Property

We rely on a combination of patent, copyright, and trade secret laws in the U.S. and other jurisdictions, as well as license agreements, confidentiality agreements, and other contractual protections, to protect our proprietary technology. We also rely on a number of registered and unregistered trademarks to protect our brand. In addition, we require our employees and independent contractors involved in development of intellectual property on our behalf to enter into agreements acknowledging that all works or other intellectual property generated or conceived by them on our behalf are our property, and assigning to us any rights, including intellectual property rights, that they may claim or otherwise have in those works or property, to the extent allowable under applicable law.

As of December 31, 2018, our intellectual property portfolio included five registered U.S. trademarks, 10 issued U.S. patents, one pending U.S. patent application and one registered U.S. copyright. As of December 31, 2018, we also had three issued patents and 10 trademark registrations outside the U.S. The expiration dates of our issued patents range from 2030 to 2034. In general, our patents and patent applications apply to aspects of our VCC cloud platform.

We are also a party to various license agreements with third parties that typically grant us the right to use certain third-party technology in conjunction with our solution. We expect that software and other applications in our industry may be subject to third-party infringement claims as the number of competitors grows and the functionality of applications in different industry segments overlaps. Any of these third parties might make a claim of infringement against us at any time.

Seasonality

We believe that there can be seasonal factors that may cause our revenues in the first half of a year to be relatively lower than our revenues in the second half of a year. During each of 2018, 2017 and 2016, 53% of our total revenues were generated in the second half of each year. We believe this is due to increased activities in retail, healthcare and education.

Employees

As of December 31, 2018, we had 983 full-time employees, including 432 in technology and operations, 204 in research and development, 228 in sales and marketing, and 119 in general and administrative. None of our employees are covered by collective bargaining agreements. We believe our employee relations are good and we have never experienced any work stoppages.

Table of Contents

Regulatory

The following summarizes important, but not all, federal, state and foreign regulations that could impact our operations. Federal and state regulations are subject to judicial review, administrative revision and statutory changes through legislation that could materially affect how we and others in this industry operate.

The Telecommunications Act of 1996 vests the Federal Communications Commission, or FCC, with jurisdiction over interstate telecommunications services, while preserving state and local jurisdiction over many aspects of these services. As a result, telecommunications services are regulated at both the federal and state levels in the United States.

We are classified as a telecommunications service provider for federal regulatory purposes. Since our business is regulated by the FCC, we are subject to existing or potential FCC regulations relating to privacy, disability access, porting of numbers, automatic number dialing, contributions to the federal Universal Service Fund and related funds, or USF, and other requirements. If we do not comply with FCC rules and regulations, we could be subject to FCC enforcement actions, fines, loss of operating authority and possibly restrictions on our ability to operate or offer certain of our services. Any enforcement action by the FCC, which may be a public process, would hurt our reputation in the industry, possibly impair our ability to sell our services to clients and could harm our business and results of operations. The FTC also has jurisdiction over some of our business practices, including advertising, trade practices, privacy and telemarketing. If we do not comply with FTC rules and regulations, we could be subject to an FTC enforcement action, fines or restrictions on our business practices.

We must comply with numerous federal regulations, including:

- Telephone Consumer Protection Act, or TCPA, which regulates the use of automatic dialing equipment and pre-recorded messages to contact consumers, and the Telemarketing Sales Rule, which has similar obligations as to telemarketing activities;
- CALEA, which requires covered entities to assist law enforcement in undertaking electronic surveillance;
- contributions to the USF, which requires that we pay a percentage of our revenues resulting from the provision of interstate telecommunications services to support certain federal programs;
- payment of annual FCC regulatory fees based on our interstate and international revenues;
- rules pertaining to access to our services by people with disabilities and contributions to the Telecommunications Relay Services fund;
- FCC rules regarding CPNI which require that we not use such information without customer approval, subject to certain exceptions; and
- Federal Trade Commission Act and rules promulgated thereunder, which generally relate to avoiding unfair and deceptive trade practices, our advertising, and privacy practices.

In addition, we must make contributions and other payments on our usage-based fees to state and local governmental entities. The tax and fee structure for communications services such as ours is complex, ambiguous and subject to interpretation. If taxing and regulatory authorities enact new rules or regulations or expand their interpretations of existing rules and regulations, we could incur additional liabilities. In addition, the collection of additional taxes, fees or surcharges in the future could increase our prices or reduce our profit margins. Compliance with these regulations may also make us less competitive with those competitors who are not subject to, or choose not to comply with, these regulations. See Note 10 of the notes to consolidated financial statements under ITEM 8 of this Form 10-K for a discussion of our liabilities related to USF matters.

As we expand internationally, we will be subject to laws and regulations in the countries in which we offer our services. Regulation of the solutions we provide outside the U.S. varies from country to country, is often unclear, and may be more onerous than those imposed on our services in the U.S. For example, the European Union adopted a new law governing data protection and privacy called the General Data Protection Regulation, or the GDPR, which became effective on May 25, 2018. The law requires companies to meet new and extended requirements regarding the processing of personal data. Non-compliance with the GDPR can trigger steep fines of up to €20 million or 4% of total worldwide annual turnover, whichever is higher. In addition, we are subject to Canada's Personal Information Protection and Electronic Documents Act, or PIPEDA, and the analogous provincial laws, which similarly impose data privacy and security obligations on our processing of personal data. Our regulatory obligations in foreign

jurisdictions could harm the use or cost of our solution in international locations as data protection and privacy laws and regulations around the world continue to evolve.

Table of Contents

The legislative and regulatory scheme for telecommunications service providers and other solutions we provide will continue to evolve and can be expected to change the competitive environment for these services. It is not possible to predict how such evolution and changes will affect our business or our industry. If we do not comply with current or future rules or regulations that apply to our business, we could be subject to substantial additional fines and penalties, we may have to restructure our service offerings, exit certain markets, accept lower margins or raise the price of our services, any of which could harm our business and results of operations. See "Risk Factors — Risks Related to Regulatory Matters" under ITEM 1A of this Form 10-K for more information.

Company Information

We were incorporated in Delaware in 2001. We operate in a single reportable segment. Our principal executive office is located at Bishop Ranch 8, 4000 Executive Parkway, Suite 400, San Ramon, CA 94583 and our telephone number is (925) 201-2000. Our website address is www.five9.com. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this annual report on Form 10-K. We own or have rights to trademarks or trade names that we use in connection with the operation of our business, including our corporate names, logos and domain names. In addition, we own or have the rights to copyrights, trade secrets and other proprietary rights that protect the content of our products. Solely for convenience, some of the copyrights, trademarks and trade names referred to in this annual report on Form 10-K are listed without ©, ® and ™ symbols, but we will assert, to the fullest extent under applicable law, our rights to our copyrights, trademarks and trade names.

Available Information

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy and information statements and amendments to reports are filed with, or furnished to, the United States Securities and Exchange Commission, or SEC, pursuant to the Securities Exchange Act of 1934, as amended, or the Exchange Act. The public may obtain these filings at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website at https://www.sec.gov that contains reports, proxy and information statements and other information regarding Five9 and other companies that file materials with the SEC electronically. Copies of Five9's reports on Form 10-K, Forms 10-Q and Forms 8-K, may be obtained, free of charge, electronically through our internet website, http://investors.five9.com/sec.cfm as soon as reasonably practicable after such material is filed electronically with, or furnished to, the SEC. The information on our website is not a part of, or incorporated by reference into, this annual report on Form 10-K.

ITEM 1A. Risk Factors

Our operations and financial results are subject to various risks and uncertainties. You should consider carefully the risks and uncertainties described below, together with all of the other information in this report. If any of the following risks or other risks actually occur, our business, financial condition, results of operations, and future prospects could be materially harmed, and the price of our common stock could decline.

Risks Related to Our Business and Industry

Our quarterly and annual results may fluctuate significantly, may not fully reflect the underlying performance of our business and may result in decreases in the price of our common stock.

Our quarterly and annual results of operations, including our revenues, profitability and cash flow have varied, and may vary significantly in the future, and period-to-period comparisons of our operating results may not be meaningful. Accordingly, the results of any one quarter or period should not be relied upon as an indication of future performance. Our quarterly and annual financial results may fluctuate as a result of a variety of factors, many of which are outside our control and, as a result, may not fully reflect the underlying performance of our business. Fluctuation in quarterly and annual results may harm the value of our common stock. Factors that may cause fluctuations in our quarterly and annual results include, without limitation:

- market acceptance of our solution;
- our ability to attract new clients and grow our business with existing clients;
- client renewal rates;
- our ability to adequately expand our sales and service team;
- our ability to acquire and maintain strategic and client relationships;

16

Table of Contents

- the amount and timing of costs and expenses related to the maintenance and expansion of our business, operations and infrastructure;
- the timing and success of new product and feature introductions by us or our competitors or any other change in the competitive dynamics of our industry, including consolidation among competitors, clients or strategic partners;
- network outages or security incidents, which may result in additional expenses or losses, legal or regulatory actions, the loss of clients, the provision of client credits, and harm to our reputation;
- seasonal factors that may cause our revenues in the first half of a year to be relatively lower than our revenues in the second half of a year;
- inaccessibility or failure of our cloud contact center software due to failures in the products or services provided by third parties;
- our ability to expand, and effectively utilize, our network of master agents and resellers;
- the timing of recognition of revenues under current and future GAAP;
- changes in our pricing policies or those of our competitors;
- increases or decreases in the costs to provide our solution or pricing changes upon any renewals of client agreements;
- the level of professional services and support we provide our clients;
- fluctuations or changes in the components of our revenue;
- the addition or loss of key clients, including through acquisitions or consolidations;
- general economic, industry and market conditions;
- the amount and timing of costs and expenses related to our research and development efforts or in the acquisition of technologies or businesses and potential future charges for impairment of goodwill from acquired companies;
- compliance with, or changes in, the current and future domestic and international regulatory environment;
- the hiring, training and retention of key employees;
- litigation or other claims against us;
- the ability to expand internationally, and to do so profitability;
- our ability to obtain additional financing; and
- advances and trends in new technologies and industry standards.

If we are unable to attract new clients or sell additional services and functionality to our existing clients, our revenue and revenue growth will be harmed.

To increase our revenue, we must add new clients, add additional agent seats and sell additional functionality to existing clients, and encourage existing clients to renew their subscriptions on terms favorable to us. As our industry matures, as our clients experience seasonal trends in their business, or as competitors introduce lower cost or differentiated products or services that are perceived to compete favorably with ours, our ability to add new clients and renew, maintain or sell additional services to existing clients based on pricing, cost of ownership, technology and functionality could be harmed. As a result, our existing clients may not renew our agreements or may decrease their number of agent seats, and we may be unable to attract new clients or grow or maintain our business with existing clients, which could harm our revenue and growth.

Furthermore, a portion of our revenue is generated by acquiring domestic and international telecommunications minutes from wholesale telecommunication service providers and reselling those minutes to our clients. As a result, if telecommunications rates decrease, we must resell more minutes to maintain our level of usage revenue.

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

For the years ended December 31, 2018, 2017 and 2016, our revenues were $257.7 million, $200.2 million and $162.1 million, respectively, representing year-over-year growth of 29% and 24%, respectively. In the future, as

Table of Contents

our revenue increases, our annual revenue growth rate may decline. We believe our revenue growth will depend on a number of factors, including our ability to:

- compete with other vendors of cloud-based enterprise contact center systems, including recent market entrants, and with providers of legacy on-premise systems;
- increase our existing clients' use of our solution and further develop our partner ecosystem;
- strengthen and improve our solution through significant investments in research and development and the introduction of new and enhanced solutions;
- introduce our solution to new markets outside of the United States and increase global awareness of our brand; and
- selectively pursue acquisitions.

If we are not successful in achieving these objectives, our ability to grow our revenue may be harmed. In addition, we plan to continue to invest in future growth, including expending substantial financial and other resources on:

- sales and marketing, including a significant expansion of our sales and professional services organization;
- our technology infrastructure, including systems architecture, management tools, scalability, availability, performance and security, as well as disaster recovery measures;
- solution development, including investments in our solution development team and the development of new solutions, as well as new applications and features for existing solutions;
- international expansion; and
- general administration, including legal, regulatory compliance and accounting expenses.

Moreover, we continue to expand our headcount and operations. We grew from 780 employees as of December 31, 2016 to 860 employees as of December 31, 2017, and to 983 employees as of December 31, 2018. We anticipate that we will continue to expand our operations and headcount in the near term and beyond. This growth has placed, and future growth will place, a significant strain on our management, administrative, operational and financial resources, company culture and 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 growth could result in difficulty or delays in adding new clients, declines in quality or client satisfaction, increases in costs, system failures, difficulties in introducing new features or solutions, the need for more capital than we anticipate or other operational difficulties, and any of these difficulties could harm our business performance and results of operations.

The expected addition of new employees and the capital investments that we anticipate will be necessary to help us grow and to manage that growth will make it more difficult for us to generate earnings or offset any future revenue shortfalls by reducing costs and expenses in the short term. If we fail to manage our anticipated growth, we will be unable to execute our business plan successfully.

Failure to adequately expand our direct sales force will impede our growth.

We need to continue to expand and optimize our sales infrastructure in order to grow our client base and business. We plan to continue to significantly expand our direct sales force, both domestically and internationally. Identifying and recruiting qualified personnel and training them in the use and sale of our solution requires significant time, expense and attention. It can take several months before our sales representatives are fully trained and productive. Our business may be harmed if our efforts, and the expense incurred, to expand and train our direct sales force do not generate a corresponding increase in revenues. In particular, if we are unable to hire, develop and retain talented sales personnel or if new sales personnel are unable to achieve desired productivity levels in a reasonable period of time, we may not be able to realize the expected benefits of this investment or increase our revenues.

Table of Contents

If we fail to manage our technical operations infrastructure, our existing clients may experience service outages, our new clients may experience delays in the deployment of our solution and we could be subject to, among other things, claims for credits or damages.

Our success depends in large part upon the capacity, stability, security and performance of our operations infrastructure. From time to time, we have experienced interruptions in service, and may experience such interruptions in the future. These service interruptions may be caused by a variety of factors, including infrastructure changes, human or software errors, viruses, security attacks, fraud, spikes in client usage and denial of service issues. In some instances, we may not be able to identify the cause or causes of these performance problems within an acceptable period of time. Our failure to achieve or maintain expected performance levels, stability and security could harm our relationships with our clients, result in claims for credits or damages, damage our reputation, significantly reduce client demand for our solution, cause us to incur significant expense and personnel time replacing and upgrading our infrastructure and harm our business.

We have experienced significant growth in the number of agents seats and interactions that our infrastructure supports. As the number of agent seats within our client base grows and our clients' use of our service increases, we need to continue to make additional investments in our capacity to maintain adequate stability and performance, the availability of which may be limited or the cost of which may be prohibitive. In addition, we need to properly manage our operations infrastructure in order to support version control, changes in hardware and software parameters and the evolution of our solution. If we do not accurately predict or improve our infrastructure requirements to keep pace with growth in our business, our business could be harmed.

Security breaches and improper access to or disclosure of our data or our clients' data, or other cyber attacks on our systems, could result in litigation and regulatory risk, harm our reputation and our business.

Our solution involves the storage and transmission of our clients' information, including information about our clients' customers or other information treated by our clients as confidential. Unauthorized access, unauthorized use of our systems, security breaches or other cyber attacks could result in the loss of confidentiality, integrity and availability of such information, leading to litigation, governmental investigations and enforcements actions, indemnity obligations, increased expense, and other liability. Such incidents could also cause interruptions to the solution we provide, degrade the user experience, or cause clients to lose confidence in our solution. In April 2017, we were notified that third parties were suspected of having unlawfully acquired some of our clients' information. We conducted an investigation, believe this acquisition was the result of a vulnerability that has now been remediated, and notified clients we determined may have been impacted. Expenses related to this incident were not material.

While we have security measures in place to protect client information and minimize the probability of security breaches and other cyber attacks, if these measures fail as a result of a cyber-attack, other third-party action, employee error, malfeasance or otherwise, and someone obtains unauthorized access to our clients' information, our reputation could be damaged, our business may suffer and we could incur significant liability. Because the techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. In addition, third parties may attempt to fraudulently induce employees or users to disclose information in order to gain access to our data or our users' data. Moreover, any failure on the part of third parties, including our clients, to maintain appropriate security measures for their own systems could harm our relationships with our clients, result in claims against us for credits or damages, damage our reputation and significantly reduce client demand for our solution. Any or all of these issues could harm our ability to attract new clients, cause existing clients to cancel, reduce or not renew their subscriptions, result in reputational damage or subject us to third-party lawsuits, governmental investigations and enforcement actions, regulatory fines or other action or liability, including orders or consent decrees forcing us to modify our business practices, all of which could materially harm our business, reputation or financial results.

The markets in which we participate involve numerous competitors and are highly competitive, and if we do not compete effectively, our operating results could be harmed.

The market for contact center solutions is highly competitive. Generally, we do not have long-term contracts with our clients and our clients can terminate our service and switch to competitors' offerings on short notice.

19

Table of Contents

We currently compete with large legacy technology vendors that offer on-premise enterprise telephony and contact center systems, such as Avaya and Cisco, and legacy on-premise software companies that come from a CTI heritage, such as Aspect and Genesys (including through its acquisition of Interactive Intelligence). These legacy technology and software companies are increasingly supplementing their traditional on-premise contact center systems with competing cloud offerings, either through acquisition or in-house development. Additionally, we compete with vendors that historically provided other contact center services and technologies and expanded to offer cloud contact center software. These companies include inContact (acquired by NICE Ltd.) and Seranova, which previously was named LiveOps. We also face competition from many smaller contact center service providers with specialized contact center software offerings, and from larger companies that have recently introduced products that compete with ours. For example, Amazon and Twilio have introduced solutions aimed at companies who wish to build their own contact centers with in-house developers. Our actual and potential competitors may enjoy competitive advantages over us, including greater name recognition, longer operating histories and larger marketing budgets, as well as greater financial or technical resources. With the introduction of new technologies and market entrants, we expect competition to continue to intensify in the future.

Some of our competitors can devote significantly greater resources than we can to the development, promotion and sale of their products and services and many have the ability to initiate or withstand substantial price competition. Current or potential competitors may also be acquired by third parties with significantly greater resources. In addition, many of our competitors have stronger name recognition, longer operating histories, established relationships with clients, more comprehensive product offerings, larger installed bases and major distribution agreements with consultants, system integrators and resellers. Our competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their product offerings or resources and ability to compete. If our competitors' products, services or technologies become more accepted than our solution, if they are successful in bringing their products or services to market earlier than ours, or if their products or services are less expensive or more technologically capable than ours, our revenues could be harmed. Pricing pressures and increased competition could result in reduced sales and revenues, reduced margins and loss of, or a failure to maintain or improve, our competitive market position, any of which could harm our business.

If our existing clients terminate their subscriptions or reduce their subscriptions and related usage, our revenues and gross margins will be harmed and we will be required to spend more money to grow our client base.

We expect to continue to derive a significant portion of our revenues from existing clients. As a result, retaining our existing clients is critical to our future operating results. We offer monthly, annual and multiple-year contracts to our clients, with 30 days' notice generally required for changes in the number of agent seats, including to zero, or termination of their contracts. Subscriptions and related usage by our existing clients may decrease if:

- clients are not satisfied with our services, prices or the functionality of our solution;
- the stability, performance or security of our solution are not satisfactory;
- our clients' business declines due to industry cycles, seasonality, business difficulties or other reasons;
- clients favor products offered by other contact center providers, particularly as competition continues to increase;
- fewer clients purchase usage from us;
- alternative technologies, products or features emerge or gain popularity that we do not provide;
- our clients or potential clients experience financial difficulties; or
- the U.S. or global economy declines.

If our existing clients' subscriptions and related usage decrease or are terminated, we will need to spend more money to acquire new clients and still may not be able to maintain our existing level of revenues. We incur significant costs and expenses, including sales and marketing expenses, to acquire new clients, and those costs and expenses are an important factor in determining our profitability. There can be no assurance that our efforts to acquire new clients will be successful.

Our growth depends in part on the success of our strategic relationships with third parties and our failure to successfully grow and manage these relationships could harm our business.

We leverage strategic relationships with third parties, such as CRM providers, WFO providers, other technology providers, system integrators, and telephony providers. For example, our CRM and system integrator

20

Table of Contents

relationships provide significant lead generation for new client opportunities. These relationships are typically not exclusive and our partners often also offer products of our competitors. As we grow our business, we will continue to depend on both existing and new strategic relationships. Our competitors may be more successful than we are in establishing or expanding relationships with third parties or may provide incentives to third parties to favor their products over our solution. These strategic partners may cease to recommend our solution to prospective clients due to actual or perceived lack of features, technological or security issues or failures, reputational concerns, economic incentives, or other factors, which would harm our business, financial condition and operations. Furthermore, there has and continues to be a significant amount of consolidation in our industry and adjacent industries, and if our partners are acquired, fail to work effectively with us or go out of business, they may no longer support or promote our solution, or may be less effective in doing so, which could harm our business, financial condition and operations. If we are unsuccessful in establishing or maintaining our strategic relationships with third parties, or these partners fail to recommend our solution, our ability to compete in the marketplace or to grow our revenues 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 client usage of our solution or increased revenue.

In addition, identifying new partners, and negotiating and documenting relationships with them, requires significant time and resources. As the complexity of our solution and our third-party relationships increases, the management of those relationships and the negotiation of contractual terms sufficient to protect our rights and limit our potential liabilities will become more complicated. We also license technology from certain third parties, including through OEM relationships. Certain of these agreements permit either party to terminate all or a portion of the relationship without cause at any time and for any reason. If one of these agreements is terminated by the other party, we would have to find an alternative source or develop new technology ourselves, which preclude, limit or delay our ability to offer our solution or certain product features to our clients, result in increased expense and harm our business. Our inability to successfully manage and maintain these complex relationships or negotiate sufficient contractual terms could harm our business.

We have established, and are continuing to increase, our network of master agents and resellers to sell our solution; our failure to effectively develop, manage, and maintain this network could materially harm our revenues.

We have established, and are continuing to increase, our network of master sales agents, which provide sales leads, and resellers, which sell our solution to new and existing clients. This network has helped us attract additional clients. Our resellers have assisted and we expect that they will continue to assist us in expanding internationally. These master agents and resellers sell, or may in the future decide to sell, solutions for our competitors. Our competitors may be able to cause our current or potential master agents or resellers to favor their services over ours, either through financial incentives, technological innovation, solution features or performance, by offering a broader array of services to these service providers or otherwise, which could reduce the effectiveness of our use of these third parties. If we fail to maintain relationships with current master agents and resellers, fail to develop relationships with new master agents and resellers in new and existing markets, if we fail to manage, train, or provide appropriate incentives to our existing master agents and resellers, or if our master agents and resellers are not successful in their sales efforts, sales of our subscriptions may decrease or not grow at an appropriate rate and our operating results could be harmed. In addition, identifying new resellers, and negotiating and documenting relationships with them, requires significant time and resources. As the complexity of our solution and our reseller relationships increases, the management of those relationships and the negotiation of contractual terms sufficient to protect our rights and limit our potential liabilities will become more complicated. Our inability to successfully manage these complex relationships or negotiate sufficient contractual terms could harm our business.

The loss of one or more of our key clients, or a failure to renew our subscription agreements with one or more of our key clients, could harm our ability to market our solution.

We rely on our reputation and recommendations from key clients in order to market and sell our solution. The loss of any of our key clients, or a failure of some of them to renew or to continue to recommend our solution, could have a significant impact on our revenues, reputation and our ability to obtain new clients. In addition, acquisitions of our clients could lead to cancellation of our contracts with those clients, thereby reducing the number of our existing and

potential clients and key reference clients.

Table of Contents

Our clients may fail to comply with the terms of their agreements, necessitating action by us to collect payment, or may terminate their subscriptions for our solution.

If clients fail to pay us under the terms of our agreements or fail to comply with the terms of our agreements, including compliance with regulatory requirements and intellectual property terms, we may terminate clients, lose revenue, be unable to collect amounts due to us, be subject to legal or regulatory action and incur costs in enforcing the terms of our contracts, including litigation. Some of our clients may seek bankruptcy protection or other similar relief and fail to pay amounts due to us, seek reimbursement for amounts already paid, or pay those amounts more slowly, which could harm our operating results, financial position and cash flow.

We sell our solution to larger organizations that require longer sales and implementation cycles and often demand more configuration and integration services or customized features and functions that we may not offer, any of which could delay or prevent these sales and harm our growth rates, business and operating results.

As we continue to target our sales efforts at larger organizations, we face greater costs, longer sales and implementation cycles and less predictability in closing sales. These larger organizations typically require more configuration and integration services, which increases our upfront investment in sales and deployment efforts, with no guarantee that these clients will subscribe to our solution or increase the scope of their subscription. Furthermore, with larger organizations, we must provide greater levels of education regarding the use and benefits of our solution to a broader group of people in order to generate a sale. As a result of these factors, we must devote a significant amount of sales support and professional services resources to individual clients and prospective clients, thereby increasing the cost and time required to complete sales. Our typical sales cycle for larger organizations is four to six months, but can be significantly longer, and we expect that our average sales cycle may increase as sales to larger organizations continue to grow as a percentage of our business. Longer sales cycles could cause our operating and financial results to be less predictable and to fluctuate from period to period. In addition, many of our clients that are larger organizations initially deploy our solution to support only a portion of their contact center agents. Our success depends on our ability to increase the number of agent seats and the number of applications utilized by larger organizations over time as we incur additional sales and marketing expense in these efforts. There is no guarantee that these clients will increase their subscriptions for our solution. If we do not expand our initial relationships with larger organizations, the return on our investments in sales and deployment efforts for these clients will decrease and our business may suffer.

Furthermore, we may not be able to provide the configuration and integration services that larger organizations typically require. For example, our solution does not currently permit clients to modify our software code, but instead requires them to use our set of APIs. If prospective clients require customized features or functions that we do not offer, and that would be difficult for them to deploy themselves, they will need to use our services or third-party service providers or we may lose sales opportunities with larger organizations and our business could suffer.

Because a significant percentage of our revenue is derived from existing clients, downturns or upturns in new sales will not be immediately reflected in our operating results and may be difficult to discern.

We generally recognize subscription revenue from clients monthly as services are delivered. As a result, a significant percentage of the subscription revenue we report in each quarter is derived from existing clients. Consequently, a decline in new subscriptions in any single quarter will likely have only a small impact on our revenue results for that quarter. However, the cumulative impact of such declines could negatively impact our business and results of operations in future quarters. Accordingly, the effect of significant downturns in sales and market acceptance of our solution, and potential changes in our pricing policies or renewal rates, will typically not be reflected in our results of operations until future periods. We also may be unable to adjust our cost structure to reflect the changes in revenue, resulting in lower margins and earnings. In addition, our subscription model makes it difficult for us to rapidly increase our revenue through additional sales in any period, as revenue from new clients will be recognized over time as services are delivered. Moreover, many of our clients initially deploy our solution to support only a portion of their contact center agents and, therefore, we may not generate significant revenue from these new clients at the outset of our relationship, if at all. Any increase to our revenue and the value of these existing client relationships will only be reflected in our results of operations as subscription revenue is recognized, and if and when these clients increase the number of agent seats and the number of components of our solution they deploy over time.

22

Table of Contents

We rely on third-party telecommunications and internet service providers to provide our clients and their customers with telecommunication services and connectivity to our cloud contact center software and any failure by these service providers to provide reliable services could cause us to lose clients and subject us to claims for credits or damages, among other things.

We rely on third-party telecommunication service providers to provide our clients and their customers with telecommunication services. These telephony services include the public switched telephone network, or PSTN, telephone numbers, call termination and origination services, and local number portability for our clients. In addition, we depend on our internet bandwidth suppliers to provide uninterrupted and error-free service through their telecommunications networks. We exercise little control over these third-party providers, which increases our vulnerability to problems with the services they provide.

When problems occur, it may be difficult to identify the source of the problem. Service disruption or outages, whether caused by our service, the products or services of our third party service providers, or our clients' or their customers' equipment and systems, may result in loss of market acceptance of our solution and any necessary repairs or other remedial actions may force us to incur significant costs and expenses.

If any of these service providers fail to provide reliable services, suffer outages, degrade, disrupt, increase the cost of or terminate the services that we and our clients depend on, we may be required to switch to another service provider. Delays caused by switching our technology to another service provider, if available, and qualifying this new service provider could materially harm our client relationships, business, financial condition and operating results. Further, any failure on the part of third party service providers to achieve or maintain expected performance levels, stability and security could harm our relationships with our clients, cause us to lose clients, result in claims for credits or damages, increase our costs or the costs incurred by our customers, damage our reputation, significantly reduce client demand for our solution and seriously harm our financial condition and operating results.

Our clients and their customers rely on internet service providers to provide them with access and connectivity to our cloud contact center software and changes in how internet service providers handle and charge for access to the internet could materially harm our client relationships, business, financial condition and operations results.

In 2015, the FCC released an order, commonly referred to as network neutrality, that, among other things, prohibited (i) the impairment or degradation of lawful internet traffic on the basis of content, application or service and (ii) the practice of favoring some internet traffic over other internet traffic based on the payment of higher fees. In June 2018, the FCC repealed the network neutrality regulations imposed by the 2015 order. Internet service providers in the U.S. may now be able to impair or degrade the use of, or increase the cost of using, our solution. Network neutrality regulations vary widely among the jurisdictions in which we operate. While certain jurisdictions have strong protections for services such as ours, others either lack a network neutrality framework or otherwise do not strictly enforce network neutrality regulations. Further, the U.S. Federal government is currently challenging in court the ability of states to enforce network neutrality requirements adopted at the state level. The impairment, degradation or prioritization of lawful internet traffic by internet service providers could materially harm the performance of our solutions, our client relationships, business, financial condition and operating results.

We depend on data centers operated by third parties and public cloud providers and any disruption in the operation of these facilities could harm our business.

We host our solution at data centers located in Santa Clara, California; Atlanta, Georgia; Slough, England and Amsterdam, the Netherlands. Any failure or downtime in one of our data center facilities could affect a significant percentage of our clients. While we control and have access to our servers and all of the components of our network that are located in our external data centers, we do not control the operation of these facilities. The owners of our data center facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one of our data center operators is acquired, closes, suffers financial difficulty or is unable to meet our growing capacity needs, we may be required to transfer our servers and other infrastructure to new data center facilities, and we may incur significant costs and service interruptions in connection with doing so.

Our data centers are subject to various points of failure. Problems with cooling equipment, generators, uninterruptible power supply, routers, switches, or other equipment, whether or not within our control, could result in service

interruptions for our clients as well as equipment damage. Our data centers are subject to disasters such as earthquakes, floods, fires, hurricanes, acts of terrorism, sabotage, break-ins, acts of vandalism and other events,

Table of Contents

which could cause service interruptions or the operators of these data centers to close their facilities for an extended period of time or permanently. The destruction or impairment of any of our data center facilities could result in significant downtime for our solution and the loss of client data. Because our ability to attract and retain clients depends on our providing clients with highly reliable service, even minor interruptions in our service could harm our business, revenues and reputation. Additionally, in connection with the continuing expansion of our existing data center facilities, there is an increased risk that service interruptions may occur as a result of server addition, relocation or other issues.

Our data centers are also subject to increased power costs. We may not be able to pass on any increase in power costs to our clients, which could reduce our operating margins.

We also host some of our voice services on the public cloud in the following regions: Tokyo, Japan; Sydney, Australia; Sao Paulo, Brazil; Dublin, Ireland and plan to increase our use of public cloud infrastructure in other regions. We have little or no control over public cloud providers. Any disruption of the public cloud or any failure of the public cloud providers to effectively design and implement sufficient security systems or plan for increases in capacity could, in turn, cause delays or disruptions in our services. In addition, using the public cloud presents a variety of additional risks, including risks related to sharing the same computing resources with others, reliance on public cloud providers' authentication, security, authorization and access control mechanisms, a lack of control over the public cloud's redundancy and security systems and fault tolerances, and a reduced ability to control data security and privacy.

Shifts over time or from quarter-to-quarter in the mix of sizes or types of organizations that purchase our solution or changes in the components of our solution purchased by our clients could affect our gross margins and operating results.

Our strategy is to sell our solution to both smaller and larger organizations. Our gross margins can vary depending on numerous factors related to the implementation and use of our solution, including the features and number of agent seats purchased by our clients and the level of usage and professional services and support required by our clients. For example, our larger clients typically require more professional services and because our professional services offerings typically have negative margins, any increase in sales of professional services could harm our gross margins and operating results. We also have lower margins on our usage revenues. Sales to larger organizations may also entail longer sales cycles and more significant selling efforts and expense. Selling to smaller clients may involve smaller contract sizes, fewer opportunities to sell additional services, a higher likelihood of contract terminations, lower returns on sales and marketing expense, fewer potential agent seats and greater credit risk and uncertainty. If the mix of organizations that purchase our solution, or the mix of solution components purchased by our clients, changes unfavorably, our revenues and gross margins could decrease and our operating results could be harmed.

We are in the process of expanding our international operations, which exposes us to significant risks.

To date, we have not generated significant revenues outside of the U.S., Canada and the U.K. However, we already have significant operations outside these countries and we expect to grow our international presence in the future. The future success of our business will depend, in part, on our ability to expand our operations and customer base to other countries. Operating in international markets requires significant resources and management attention and will subject us to regulatory, economic, and political risks that are different from those in the U.S. In addition, in order to effectively market and sell our solutions in international markets, we will be required to localize our solutions, including the language in which our solutions are offered, which will increase our costs, could result in delays in offering our solutions in these markets and may decrease the effectiveness of our sales efforts. Due to our limited experience with international operations and developing and managing sales and distribution channels in international markets, our international expansion efforts may not be successful.

We have a history of losses and we may be unable to achieve or sustain profitability.

We have incurred significant losses in each annual period since our inception in 2001. We incurred net losses of $0.2 million, $9.0 million and $11.9 million for the years ended December 31, 2018, 2017 and 2016, respectively. As of December 31, 2018, we had an accumulated deficit of $151.5 million. These losses and our accumulated deficit reflect the substantial investments we have made to develop our solution and acquire new clients. We expect the dollar

amount of our costs and expenses to increase in the future as revenue increases, although at a slower rate. We expect our losses to continue for the foreseeable future as we continue to invest in research and development and

Table of Contents

expand our business. Furthermore, to the extent we are successful in increasing our client base, we may also incur increased losses because costs associated with acquiring clients are generally incurred up front, while revenues are recognized over the course of the client relationship. We also have negative gross margins on our professional services, which are expected to continue in the medium term. In addition, as a public company, we incur significant legal, accounting and other expenses. Our historical or recent growth in revenues is not necessarily indicative of our future performance. Accordingly, there is no assurance that we will achieve profitability in the future or that, if we do become profitable, we will sustain profitability.

If the market for cloud contact center software solutions develops more slowly than we expect or declines, our business could be harmed.

The cloud contact center software market is not as mature as the market for legacy on-premise contact center systems, and it is uncertain whether cloud contact center solutions will achieve and sustain high levels of client demand and market acceptance. Our success will depend to a substantial extent on the widespread adoption of cloud contact center software solutions as a replacement for legacy on-premise systems. Many larger organizations have invested substantial technical, personnel and financial resources to integrate legacy on-premise contact center systems into their businesses and, therefore, may be reluctant or unwilling to migrate to cloud contact center solutions such as ours. It is difficult to predict client adoption rates and demand for our solution, the future growth rate and size of the cloud contact center software market, or the continued introduction of competitive products and services, including by new market entrants. The expansion of the cloud contact center software market depends on a number of factors, including the refresh rate for legacy on-premise systems, cost, performance and perceived value associated with cloud contact center software solutions, as well as the ability of providers of cloud contact center software solutions to address security, stability and privacy concerns. If we or other cloud contact center solution providers or other cloud providers experience security incidents, loss of client data, disruptions in service or other problems, the market for cloud contact center software products, solutions and services as a whole, including our solution, may be harmed. If cloud contact center software solutions do not achieve widespread adoption, or there is a reduction in demand for such solutions caused by a lack of client acceptance, enhanced product offerings, including cloud-based offerings, from on-premise providers, technological challenges, weakening economic conditions, security or privacy concerns, competing technologies and products, decreases in corporate spending or otherwise, it could result in decreased revenues and our business could be harmed.

Our recent growth makes it difficult to evaluate and predict our current business and future prospects.

While we have been in existence since 2001, much of our growth has occurred in recent years. Our recent growth may make it difficult for investors to evaluate our current business and our future prospects. We have encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly changing industries, including increasing and unforeseen expenses as we continue to grow our business.

Our ability to forecast our future operating results is limited and subject to a number of uncertainties, including our ability to predict revenue and expense levels, and plan for and model future growth. We have encountered and will continue to encounter risks and uncertainties frequently experienced by growing companies in rapidly changing industries, such as the risks and uncertainties described in this report. If our assumptions regarding these risks and uncertainties, which we use to plan our business, are incorrect or change due to adjustments in our markets or our competitors and their product offerings, or if we do not address these risks successfully, our operating and financial results could differ materially from our expectations and our business could suffer.

If our solution fails, or is perceived to fail, to perform properly or if it contains technical defects, our reputation could be harmed, our market share may decline and we could be subject to product liability claims.

Our solution may contain undetected errors or defects that may result in failures or otherwise cause our solution to fail to perform in accordance with client expectations and contractual obligations. Moreover, our clients could incorrectly implement or inadvertently misuse our products, which could result in client dissatisfaction and harm the perceived utility of our products and our brand. Because our clients use our solution for mission-critical aspects of their business, any real or perceived errors or defects in, or other performance problems with, our solution may damage our clients' businesses and could significantly harm our reputation. If that occurs, we could lose future sales, or our existing clients could cancel our solution, seek payment credits, seek damages against us, or delay or withhold

payment to us, which could result in reduced revenues, an increase in our provision for uncollectible accounts and service credits, an increase in collection cycles for accounts receivable, and harm our financial results.

Table of Contents

In addition, since telecommunications billing is inherently complex and requires highly sophisticated information systems to administer, our billing system may experience errors or we may improperly operate the system, which could result in the system incorrectly calculating the fees owed by our clients or related taxes and administrative fees. Clients also may make indemnification or warranty claims against us, which could result in significant expense and risk of litigation. Product performance problems could result in loss of market share, reputational harm, failure to achieve market acceptance and the diversion of development resources.

Any product liability, intellectual property, warranty or other claims against us could damage our reputation and relationships with our clients, and could require us to spend significant time and money in litigation or pay significant settlements or damages. Although we maintain general liability insurance, including coverage for errors and omissions, this coverage may not be sufficient to cover liabilities resulting from such claims. Also, our insurers may disclaim coverage. Our liability insurance also may not continue to be available to us on reasonable terms, in sufficient amounts, or at all. Any contract or product liability claims successfully brought against us would harm our business.

We are subject to many hazards and operational risks that can disrupt our business, some of which may not be insured or fully covered by insurance.

Our operations are subject to many hazards inherent in the cloud contact center software business, including:

- damage to third-party and our infrastructure and data centers, related equipment and surrounding properties caused by earthquakes, hurricanes, tornadoes, floods, fires and other natural disasters, explosions and acts of terrorism;
- security breaches resulting in loss or disclosure of confidential client and customer data and potential liability to clients and non-client third parties for such losses on disclosures;
- inadvertent damage from third parties; and
- other hazards that could also result in suspension of operations, personal injury and even loss of life.

These risks could result in substantial losses and the curtailment or suspension of our operations. For example, in the event of a major earthquake along the West Coast of the United States (where our corporate headquarters and one of our data centers are located), hurricane, tropical storm, flooding or severe weather in the southeastern United States (where our other U.S. data center is located) or catastrophic events such as fire, power loss, telecommunications failure, cyber-attack, war or terrorist attack, we may be unable to continue our operations and may endure system and service interruptions, reputational harm, delays in product development, breaches of data security and loss of critical data, any of which could harm our business and operating results.

We are not insured against all claims, events or accidents that might occur. If a significant accident or event occurs that is not fully insured, if we fail to recover all anticipated insurance proceeds for significant accidents or events for which we are insured, or if we or our data center providers fail to reopen facilities damaged by such accidents or events, our operations and financial condition could be harmed. In addition to being denied coverage under existing insurance policies, we may not be able to maintain or obtain insurance of the type and amount we desire at reasonable rates.

The contact center software solutions market is subject to rapid technological change, and we must develop and sell incremental and new features and products in order to maintain and grow our business.

The contact center software solutions market is characterized by rapid changes in client requirements, frequent introductions of new and enhanced products and features and continuing and rapid technological advancement. To compete successfully, we must continue to devote significant resources to design, develop, deploy and sell new and enhanced contact center products, applications and features that provide increasingly higher capabilities, performance and stability at lower cost. If we are unable to develop or acquire new features for our existing solution or new applications that achieve market acceptance or that keep pace with technological developments, our business would be harmed. For example, we are focused on enhancing the reliability, features and functionality of our contact center solution to enhance its utility to our clients, particularly larger clients, with complex, dynamic and global operations. The success of these enhancements depends on many factors, including timely development, introduction and market acceptance, as well as our ability to transition our existing clients to these new products, applications and features. Failure in this regard may significantly impair our revenue growth. In addition, because our solution is designed to operate on a variety of systems, we need to continuously modify and enhance our solution to keep pace with changes

in hardware, operating systems, the increasing trend toward multi-channel

Table of Contents

communications and other changes to software technologies. We may not be successful in developing or acquiring these modifications and enhancements or bringing them to market in a timely fashion. Furthermore, uncertainties about the timing and nature of new network platforms or technologies, or modifications to existing platforms or technologies, could delay introduction of changes and updates to our solution and increase our research and development expenses. Any failure of our solution to operate effectively with future network platforms and technologies could reduce the demand for our solution, result in client dissatisfaction and harm our business.

Our ability to continue to enhance our solution is dependent on adequate research and development resources. If we are not able to adequately fund our research and development efforts, we may not be able to compete effectively and our business and operating results may be harmed.

In order to remain competitive, we must devote significant and increasing resources to develop new solution offerings, features and enhancements to our existing cloud contact center software, which will increase our research and development and operating expenses. Maintaining adequate research and development personnel and resources to meet the demands of the market is essential. If we are unable to develop products, applications or features internally due to constraints, such as high employee turnover, insufficient cash, inability to hire sufficient research and development personnel or a lack of other research and development resources, we may miss market opportunities. Furthermore, many of our competitors expend considerably greater amounts on their research and development programs than we do, and those that do not may be acquired by larger companies that would allocate greater resources to our competitors' research and development programs. Our failure to devote adequate research and development resources or compete effectively with the research and development programs of our competitors could harm our business.

If we are unable to maintain the compatibility of our software with other products and technologies, our business would be harmed.

Our clients often integrate our solution with their business applications, particularly third-party CRM solutions. These third-party providers or their partners could alter their products so that our solution no longer integrates well with them, or they could delay or deny our access to technology releases that allow us to adapt our solution to integrate with their products in a timely fashion. If we cannot adapt our solution to changes in complementary technology deployed by our clients, it may significantly impair our ability to compete effectively.

Our business could be harmed if our clients are not satisfied with the professional services and technical support provided by us or our partners.

Our business depends on our ability to satisfy our clients, not only with respect to our solution, but also with the professional services and technical support that are required for our clients to implement and use our solution to address their business needs. Professional services and technical support may be performed by our own staff or, in a select subset of cases, by third parties. Our professional services offerings typically have negative margins. Accordingly, any increase in sales of professional services could harm our gross margins and operating results. We will need to continue to expand and optimize our professional services and technical support in order to keep up with new client installations and ongoing service, which takes time and expense to implement. Identifying and recruiting qualified service personnel and training them in our solution is difficult and competitive and requires significant time, expense and attention. We may be unable to respond quickly enough to accommodate short-term increases in client demand for support services. We also may be unable to modify the format of our support services or change our pricing to compete with changes in support services provided by our competitors. Increased client demand for these services, without corresponding revenues, could increase our costs and harm our operating results. If a client is not satisfied with the deployment and ongoing services performed by us or a third party, we could lose clients, miss opportunities to expand our business with these clients, incur additional costs, or suffer reduced (including negative) margins on our service revenue, any of which could damage our ability to grow our business. In addition, negative publicity related to our professional services and technical support, regardless of its accuracy, may damage our business by affecting our ability to compete for new business with current and prospective clients.

Sales to clients outside the United States or with international operations and our international sales efforts and operations support expose us to risks inherent in international sales and operations.

A key element of our growth strategy is to expand our international sales efforts and develop a worldwide client base. Because of our limited experience with international sales, our international expansion may not be

Table of Contents

successful and may not produce the return on investment we expect. To date, we have realized only a small portion of our revenues from clients outside the United States, with approximately 93% of our revenue for the year ended December 31, 2018 derived from clients with billing addresses in the United States.

Our international employees are primarily located in the Philippines, where technical support, training and other professional services are performed, and Russia, where software development operations are performed. We have increased our sales, marketing and support personnel in the U.K. to maintain and support our European data centers. Operating in international markets requires significant resources and management attention and subjects us to intellectual property, regulatory, economic and political risks that are different from those in the United States. As we increase our international sales efforts and continue our other international operations, we will face risks in doing business internationally that could harm our business, including:

- the need to establish and protect our brand in international markets;
- the need to localize and adapt our solution for specific countries, including translation into foreign languages and associated costs and expenses;
- difficulties in staffing and managing foreign operations, particularly hiring and training qualified sales and service personnel;
- the need to make implementations, and offer customer care, in various languages;
- different pricing environments, longer sales and accounts receivable payment cycles and collections issues;
- weaker protection for intellectual property and other legal rights than in the U.S. and practical difficulties in enforcing intellectual property and other rights outside of the U.S.;
- privacy and data protection laws and regulations that are complex, expensive to comply with and may require that client data be stored and processed in a designated territory;
- increased risk of piracy, counterfeiting and other misappropriation of our intellectual property in our locations outside the U.S.;
- new and different sources of competition;
- general economic conditions in international markets;
- fluctuations in the value of the U.S. dollar and foreign currencies, which may make our solution more expensive in other countries or may increase our costs, impacting our operating results when translated into U.S. dollars;
- compliance with customs duties, tariffs and other international trade complexities;
- compliance challenges related to the complexity of multiple, conflicting and changing governmental laws and regulations, including employment, tax, telecommunications and telemarketing laws and regulations;
- increased risk of international telecom fraud;
- laws and business practices favoring local competitors;
- compliance with laws and regulations for foreign operations, including the Foreign Corrupt Practices Act, the U.K. Bribery Act and other anti-corruption laws, import and export control laws, tariffs, trade barriers, economic sanctions and regulatory or contractual limitations on our ability to sell our solution in certain foreign markets, and the risks and costs of non-compliance;
- increased financial accounting and reporting burdens and complexities;
- restrictions or taxes on the transfer of funds;
- adverse tax consequences; and
- unstable economic and political conditions.

These risks could harm our international operations, increase our operating costs and hinder our ability to grow our international business and, consequently, our overall business and results of operations. In addition, if the political and military situation in Russia and the Ukraine, or the relationship between Russia and the United States, significantly worsens, or if either Russia or the United States imposes significant new economic sanctions or restrictions on doing business, and we are restricted or precluded from continuing our software development operations in Russia, our costs could increase, and our product development efforts, business and results of operations could be significantly harmed. In addition, compliance with laws and regulations applicable to our international operations increases our cost of doing business outside the United States. We may be unable to keep current with changes in foreign government

28

Table of Contents

requirements and laws as they change from time to time. Failure to comply with these regulations could harm our business. In many countries outside the United States, it is common for others to engage in business practices that are prohibited by our internal policies and procedures or United States or international regulations applicable to us. Although we have implemented policies and procedures designed to ensure compliance with these laws and policies, there can be no assurance that all of our employees, contractors, strategic partners and agents will comply with these laws and policies. Violations of laws or key control policies by our employees, contractors, strategic partners or agents could result in delays in revenue recognition, financial reporting misstatements, fines, delays in filing financial reports required as a public company, penalties, or prohibitions on selling our solution, any of which could harm our business.

We have undergone recent changes to our management team; we depend on our senior management team, and the loss of one or more key employees or an inability to attract and retain highly skilled executives and other employees could harm our business and results of operations.

Our former Chief Executive Officer resigned for health reasons (though he remains as Executive Chairman of our Board of Directors) effective December 2, 2017, resulting in the appointment of our Chief Financial Officer as Interim Chief Executive Officer, and the promotion of our EVP of Global Sales and Services to President. On May 1, 2018, we announced the appointment, effective as of May 3, 2018, of a new Chief Executive Officer. In connection with this appointment, our Chief Financial Officer no longer serves as Interim Chief Executive Officer, but continues to serve as our Chief Financial Officer. In addition, we have recently added several new executive officers.

Our success depends, in part, upon the performance and continued services of our executive officers and senior management team. If our new executive leadership team fails to perform effectively or if we fail to attract or retain our key executives or senior management, our business, financial condition or results of operations could be harmed. We also rely on our leadership team in the areas of research and development, marketing, sales, services and general and administrative functions, and on mission-critical individual contributors. The loss of one or more of our executive officers or key employees could seriously harm our business. We currently do not maintain key person life insurance policies on any of our employees.

To execute our growth plan, we must attract and retain highly qualified personnel and we may incur significant costs (including stock-based compensation expense) to do so. Competition for these personnel is intense, especially for senior executives, engineers highly experienced in designing and developing cloud software and for senior sales personnel. We have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. We invest significant time and expense in training our employees, which increases their value to competitors who may seek to recruit them and increases our costs. If we fail to attract new personnel or fail to retain and motivate our current personnel, particularly our executive officers and senior management team, our business and future growth prospects would be harmed. Many of the companies with which we compete for experienced personnel have greater resources than we have. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached legal obligations, resulting in a diversion of our time and resources and, potentially, damages.

Volatility or lack of performance in the trading price of our common stock may also affect our ability to attract and retain qualified personnel because job candidates and existing employees often emphasize the value of the stock awards they receive in connection with their employment when considering whether to accept or continue employment. If the perceived value of our stock awards is low or declines, it may harm our ability to recruit and retain highly skilled employees.

If we fail to grow our marketing capabilities and develop widespread brand awareness cost effectively, our business may suffer.

Our ability to increase our client base and achieve broader market acceptance of our cloud contact center software solution will depend to a significant extent on our ability to expand our marketing operations. We plan to continue to dedicate significant resources to our marketing programs, including internet advertising, digital marketing campaigns, social media, trade shows, industry events, co-marketing with strategic partners and telemarketing. The effectiveness of our online advertising has varied over time and may vary in the future due to competition for key search terms, changes in search engine use and changes in the search algorithms used by major search engines. All of these efforts will continue to require us to invest significant financial and other resources in

29

Table of Contents

our marketing efforts. Our business will be seriously harmed if our efforts and expenditures do not generate a proportionate increase in revenue.

In addition, we believe that developing and maintaining widespread awareness of our brand in a cost-effective manner, both in the United States and internationally, is critical to achieving widespread acceptance of our solution and attracting new clients. Brand promotion activities may not generate client awareness or increase revenues, and even if they do, any increase in revenues may occur after the expense has been incurred, and may not offset the costs and expenses of building our brand. If we fail to successfully promote, maintain and protect our brand, or incur substantial costs and expenses, we may fail to attract or retain clients necessary to realize a sufficient return on our brand-building efforts, or to achieve the widespread brand awareness that is critical to increasing client adoption of our solution.

We may not be able to secure additional financing on favorable terms, or at all, to meet our future capital needs.

To date, we have financed our operations, primarily through sales of our solution, lease facilities and the net proceeds from our equity and debt financings, including the sale of our convertible senior notes. We do not know when or if our operations will generate sufficient cash to fund our ongoing operations. We may require additional capital to respond to business opportunities, challenges, acquisitions, a decline in sales, increased regulatory obligations or unforeseen circumstances and may engage in equity or debt financings or enter into credit facilities.

We have a substantial amount of debt. As of December 31, 2018, we had approximately $258.8 million in principal amount outstanding under our convertible senior notes entered into in May 2018. See Note 6 to the consolidated financial statements.

Any debt financing obtained by us in the future would cause us to incur additional debt service expenses and could include 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 pursue business opportunities and could be secured by all of our assets. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to grow and support our business and to respond to business challenges could be significantly limited.

Adverse economic conditions may harm our business.

Our business depends on the overall demand for cloud contact center software solutions and on the economic health of our current and prospective clients. In addition to the United States, Canada, the U.K. and Latin America, we plan to market and sell our solution in other European countries, Asia and other international markets. If economic conditions, including currency exchange rates, in these areas and other key potential markets for our solution continue to remain uncertain or deteriorate, clients may delay or reduce their contact center and overall information technology spending. If our clients or potential clients experience economic hardship, this could reduce the demand for our solution, delay and lengthen sales cycles, lower prices for our solution, and lead to slower growth or even a decline in our revenues, operating results and cash flows.

We may acquire other companies or technologies or be the target of strategic transactions, which could divert our management’s attention, result in additional dilution to our stockholders and otherwise disrupt our operations and harm our operating results.

We may acquire or invest in businesses, applications or technologies that we believe could complement or expand our solution, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management, and cause us to incur various costs and expenses in identifying, investigating and pursuing acquisitions, whether or not they are consummated. We may not be able to identify desirable acquisition targets or be successful in entering into an agreement with any particular target.

To date, the growth in our business has been primarily organic, and we have limited experience in acquiring other businesses, having only completed one small acquisition in 2013. In any future acquisitions, we may not be able to successfully integrate acquired personnel, operations and technologies, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from our future acquired businesses due to

a number of factors, including:

Table of Contents

- inability to integrate or benefit from acquisitions in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition, including legal claims arising from the activities of companies we acquire;
- acquisition-related costs;
- difficulty converting the clients of the acquired business to our solution and contract terms, including due to disparities in the revenue, licensing, support or professional services model of the acquired company;
- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional costs and expenses associated with supporting legacy products and the hosting infrastructure of the acquired business;
- diversion of management's attention from other business concerns;
- harm to our existing relationships with our partners and clients as a result of the acquisition;
- the loss of our or the acquired business's key employees;
- diversion of resources that could have been more effectively deployed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could harm our results of operations.

Acquisitions could also result in dilutive issuances of equity securities, the use of our available cash, or the incurrence of additional debt to fund such acquisitions, which could harm our operating results. If an acquired business fails to meet our expectations, our operating results, business and financial condition could suffer.

In addition, third parties may be interested in acquiring us. We will continue to consider, evaluate and negotiate such transactions as we deem appropriate. Such potential transactions may divert the attention of management, and cause us to incur various costs and expenses in investigating, evaluating and negotiating such transactions, whether or not they are consummated.

If we are unable to maintain and further develop effective internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock may decrease.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, requires that we evaluate and determine the effectiveness of our internal control over financial reporting and provide a management report and attestation from our independent registered public accountant on our internal control over financial reporting. This attestation has and will continue to increase our independent public accountant costs and expenses.

If we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective, which could cause our stock price to decline. 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.

If we have material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. If we identify material weaknesses in our internal control over financial reporting, if we are unable to comply with the requirements of Section 404 in a timely manner, if we are unable to assert that our internal control over financial reporting is effective or if our independent registered public accounting firm is unable to attest that our internal control over financial reporting is effective, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could decrease. We could also become subject to stockholder or other third-party litigation as well as investigations by the stock exchange on which our securities are listed, the SEC or other regulatory authorities, which could require additional financial and management resources and could result in fines, penalties, trading suspensions or other remedies.

31

Table of Contents

Changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and affect our reported operating results.

U.S. GAAP is subject to interpretation by the FASB, the SEC and various bodies formed to promulgate and interpret appropriate accounting principles. A change in accounting standards or practices can have a significant effect on our reported results and may even affect our financial statements issued before the change is effective. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and will occur in the future. Changes to existing rules or the questioning of current practices may harm our reported financial results or the way we account for or conduct our business.

For example, in May 2014, the FASB issued new revenue recognition rules under Accounting Standard Codification 606 - Revenue from Contracts with Customers ("ASC 606"), which included a single set of rules and criteria for revenue recognition to be used across all industries. We adopted this new standard in January 2018 using a modified retrospective method. With the adoption of this standard, the timing of our commission expense recognition changed, which caused fluctuations in our operating results. See Note 2 to the consolidated financial statements for information regarding the effect of new accounting pronouncements on our financial statements.

The application of any new accounting guidance is, and will be, based on all information available to us as of the date of adoption and up through subsequent interim reporting, including transition guidance published by the standard setters. However, the interpretation of these new standards may continue to evolve as other public companies adopt the new guidance and the standard setters issue new interpretative guidance related to these rules. As a result, changes in the interpretation of these rules could result in material adjustments to our application of the new guidance, which could have a material effect on our results of operations and financial condition. Additionally, any difficulties in implementing these pronouncements could cause us to fail to meet our financial reporting obligations, which could result in regulatory discipline, cessation or disruption of trading in our common stock and harm investors' confidence in us.

In addition, certain factors have in the past and may in the future cause us to defer recognition of revenues. For example, the inclusion in our client contracts of non-standard terms, such as acceptance criteria, could require the deferral of revenue. To the extent that such contracts become more prevalent in the future our revenue may be harmed. Because of these factors and other specific requirements under U.S. GAAP for revenue recognition, we must have precise terms and conditions in our arrangements in order to recognize revenue when we deliver our solution or perform our professional services. Negotiation of mutually acceptable terms and conditions can extend our sales cycle, and we may accept terms and conditions that do not permit revenue recognition at the time of delivery.

The results of the U.K.'s referendum on withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

In June 2016, a majority of voters in the U.K. elected to withdraw from the European Union in a national referendum, referred to as Brexit. The referendum was advisory, and the terms of any withdrawal are subject to a negotiation period that could last at least two years after the government of the U.K. formally initiated the withdrawal process on March 29, 2017. This election to withdraw has created significant uncertainty about the future relationship between the U.K. and the European Union, including with respect to the laws and regulations that will apply as the U.K. and the European Union determine which European Union laws to replace or replicate after the effectiveness of the withdrawal. The referendum has also given rise to calls for the governments of other European Union member states to consider withdrawal.

Brexit has harmed and may continue to harm global economic conditions and the stability of global financial markets. For example, Brexit introduced significant volatility in global stock markets and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. This volatility will likely continue while the U.K. and the European Union negotiate the terms of the withdrawal, as well as after the withdrawal takes effect. In November 2018, the European Union and the U.K. agreed upon the terms of an agreement that sets out the terms of the U.K.'s withdrawal from the European Union and includes a transitional period until December 31, 2020. If the agreement is not ratified by the European Union and the U.K. before the end of March 2019, then, absent the U.K. withdrawing its notice or members of the European Union agreeing to extend the two-year notice period, the U.K. will leave the European Union with no agreements in place beyond those temporary

arrangements which have or may be put in place by the European Union or individual European Union Member States, and the U.K. as part of no-deal contingency efforts and those

Table of Contents

conferred by mutual membership of the World Trade Organization. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the U.K. leaving the European Union with no agreements in place would have and how such withdrawal would affect our business and operations.

The strengthening of the U.S. dollar relative to other currencies will make our solution more expensive to international clients and may harm our international sales. Brexit could also cause disruptions to and create uncertainty surrounding our business, including affecting our relationships with our existing and future clients, owners of our data center facilities in the U.K. and the Netherlands and our data center partners' ability to retain and hire qualified employees, which could harm our business, business opportunities, results of operations, financial condition and cash flows.

We may not be able to utilize a significant portion of our net operating loss or research tax credit carryforwards, and under recently enacted lower federal corporate tax rates such tax benefits will be of less value, which could harm our profitability and financial condition.

As of December 31, 2018, we had federal and state net operating loss carryforwards due to prior period losses of $216.8 million and $120.0 million, respectively, which if not utilized will begin to expire in 2024 and 2028 for federal and state purposes, respectively. As of December 31, 2018, we also had research credit carryforwards for federal and California state tax purposes of $3.2 million and $2.8 million, respectively. If not utilized, the federal research credit carryforwards will begin to expire in 2022. The California research credit carryforwards do not expire. If we are unable to generate sufficient taxable income to utilize our net operating loss and research tax credit carryforwards, these carryforwards could expire unused and be unavailable to offset future income tax liabilities, which could harm our profitability and financial condition in future periods.

In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, or IRC Section 382, our ability to utilize net operating loss carryforwards or other tax attributes, such as research tax credits, in any taxable year may be limited if we experience an "ownership change." An IRC Section 382 "ownership change" generally occurs if one or more stockholders or groups of stockholders who own at least 5% of our stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. We experienced an ownership change prior to 2014 and the disclosed amounts of our net operating losses and research credit carryforwards have been reduced for the resulting effect of the IRC Section 382 limitations. Subsequent or future issuances or sales of our stock (including certain transactions involving our stock that are outside of our control) could cause an "ownership change" again, which would impose an annual limit on the amount of pre-ownership change net operating loss carryforwards and other tax attributes we can use to reduce our taxable income, potentially causing those tax attributes to expire unused or to be reduced, and increasing and accelerating our liability for income taxes. It is possible that such an ownership change could materially reduce our ability to use our net operating loss carryforwards or other tax attributes to offset taxable income, which could require us to pay more income taxes than if we were able to fully utilize our net operating loss carryforwards and harm our profitability.

In December 2017, the Tax Cuts and Jobs Act was enacted. The effect of the new tax law, and its regulations and interpretations, as well as any additional tax reform legislation in the United States or elsewhere, could harm our business and financial condition by, among other things, decreasing the value of our net operating loss carryforwards. If we are required to reduce the value of our net operating loss carryforwards, we may be required to record a corresponding charge to current earnings, which could harm our financial condition and results of operations in the period in which it is recorded.

Risks Related to Our Intellectual Property

Any failure to protect our intellectual property rights could impair our ability to protect our proprietary technology and our brand.

Our success and ability to compete depend in part upon our intellectual property. As of December 31, 2018, our intellectual property portfolio included five registered U.S. trademarks, 10 issued U.S. patents, one pending U.S. patent application and one registered U.S. copyright. As of December 31, 2018, we also had three issued patents, and 10 trademark registrations outside the U.S. The expiration dates of our issued patents range from 2030 to 2034. We primarily rely on copyright, trade secret and trademark laws, trade secret protection and confidentiality or license agreements with our employees, clients, partners and others to protect our intellectual property rights. However, the

steps we take to secure, protect and enforce our intellectual property rights may be inadequate. We

Table of Contents

may not be able to obtain any further patents or trademarks, our current patents could be invalidated or our competitors could design their products around our patented technology, and our pending applications may not result in the issuance of patents or trademarks. We have pending patent applications and trademark registrations outside the U.S., and we may have to expend significant additional resources to obtain additional protection and maintain current registrations as we expand our international operations. Furthermore, legal standards relating to the validity, enforceability and scope of protection of intellectual property rights in other countries, including Russia, where we have significant research and development operations, and the Philippines, where we have significant technical support, training and other professional services operations, are uncertain and may afford little or no effective protection of our proprietary technology, and the risk of intellectual property misappropriation may be higher in these countries. Consequently, we may be unable to prevent our proprietary technology from being infringed or exploited abroad, which could affect our ability to expand into international markets or require costly efforts to protect our technology.

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 our management and could result in the impairment or loss 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. Accordingly, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. Our failure to secure, protect and enforce our intellectual property rights could substantially harm the value of our technology, solutions, brand and business.

We will likely continue to be subject to third-party intellectual property infringement claims.

There is considerable patent and other intellectual property development activity and litigation in our industry. Our success depends upon our not infringing upon the intellectual property rights of others. Our competitors, as well as a number of other entities and individuals, may own or claim to own intellectual property relating to our industry. From time to time, third parties have claimed that we are infringing upon their intellectual property rights. For example, NobelBiz, Inc., or NobelBiz, filed a patent infringement lawsuit against us alleging that our local caller ID management service infringed on certain of its patents. In December 2017, the lawsuit was settled and the case was dismissed in its entirety.

Certain technology necessary for us to provide our solution may be patented, copyrighted or otherwise protected by other parties either now or in the future. In such case, we would have to negotiate a license for the use of that technology. We may not be able to negotiate such a license at a price that is acceptable, or at all. The existence of such a patent, copyright or other protections, or our inability to negotiate a license for any such technology on acceptable terms, could force us to cease using such technology and offering solutions incorporating such technology.

Others have claimed, or in the future may claim, that our solution and underlying technology infringe or violate their intellectual property rights. However, we may be unaware of the intellectual property rights that others may claim cover some or all of our technology or solution. Any claims or litigation could cause us to incur significant costs and expenses and, if successfully asserted against us, could require that we pay substantial damages or ongoing royalty payments, require that we refrain from using, manufacturing or selling certain offerings or features or using certain processes, prevent us from offering our solution or certain features thereof, or require that we comply with other unfavorable terms, any of which could harm our business and operating results. We may also be obligated to indemnify our clients or business partners and pay substantial settlement costs, including royalty payments, in connection with any such claim or litigation and to obtain licenses, which could be costly. Even if we were to prevail in such a dispute, any litigation regarding our intellectual property could be costly and time consuming and divert the attention of our management and key personnel from our business operations.

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

Our solution incorporates certain third-party software obtained under licenses from other companies. We anticipate that we will continue to rely on such software from third parties in the future. Although we believe that there are

commercially reasonable alternatives to the third-party software we currently license, this may not be the case, or it may be difficult or costly to transition to other providers. In addition, integration of the software used in

Table of Contents

our solution with new third-party software may require significant work and require substantial investment of our time and resources. To the extent that our solution depends upon the successful operation of third-party software in conjunction with our software, any undetected errors or defects in this third-party software could prevent the deployment or impair the functionality of our solution, delay new product or solution introductions, result in increased costs, or a failure of our solution and injure our reputation. Our use of additional or alternative third-party software would require us to enter into license agreements with third parties and to integrate such software to our solution. There can be no assurance that the technology licensed by us will continue to provide competitive features and functionality or that licenses for technology currently utilized by us or other technology that we may seek to license in the future, including to replace current third-party software, will be available to us at a reasonable cost or on commercially reasonable terms, or at all. Third-party licensors may also be acquired or go out of business, which could preclude us from continuing to use such technology. The loss of, or inability to maintain, existing licenses could result in lost product features and litigation. The loss of existing licenses could also result in implementation delays or reductions until equivalent technology or suitable alternative solutions could be developed, identified, licensed and integrated, and could increase our costs and harm our business.

Our solution utilizes 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 solution includes software covered by open source licenses, which may include, for example, free general public use licenses, open source front-end libraries and open source applications. The terms of various open source licenses have not been interpreted by United States courts, and there is a risk that such licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to market our solution. By the terms of certain open source licenses, we could be required to release the source code of our proprietary software, and to make our proprietary software available under open source licenses, if we combine our proprietary software with open source software in a certain manner. In the event that portions of our proprietary 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 our technologies, or otherwise be limited in the licensing of our technologies, each of which could reduce or eliminate the value of our technologies and solutions. In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or controls on the origin of the software. Given the nature of open source software, there is also a risk that third parties may assert copyright and other intellectual property infringement claims against us based on our use of certain open source software programs. Many of the risks associated with the usage of open source software cannot be eliminated, and could harm our business.

Risks Related to Regulatory Matters

Failure to comply with laws and regulations could harm our business and our reputation.

Our business is subject to regulation by various federal, state, local and foreign governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, environmental laws, consumer protection laws, anti-bribery laws, import/export controls, federal securities laws and tax laws and regulations. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States and in other circumstances these requirements may be more stringent in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties or injunctions. If any governmental sanctions, fines or penalties are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, operating results, financial condition and our reputation could be harmed. 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 further harm our business, operating results, financial condition and our reputation.

Table of Contents

Alleged or actual failure to comply with the constantly evolving legal and contractual environment surrounding calling consumers and wireless phone numbers by other companies or our competitors or governmental or private enforcement actions related thereto, could harm our business, financial condition, results of operations and cash flows.

The legal and contractual environment surrounding calling consumers and wireless phone numbers is constantly evolving. In the United States, two federal agencies, the Federal Trade Commission, or FTC and the FCC, and various states have laws including, at the federal level, the Telephone Consumer Protection Act of 1991, or TCPA, that restrict the placing of certain telephone calls and texts to residential and wireless telephone subscribers by means of automatic telephone dialing systems, prerecorded or artificial voice messages and fax machines. These laws require companies to institute processes and safeguards to comply with these restrictions. The legal interpretation of certain of the requirements of these laws has been in dispute before the courts and federal agencies and the FCC is expected to conduct further rulemaking proceedings that may further alter its interpretation of the legal requirements involved. Some of these laws, where a violation is established, can be enforced by the FTC, FCC, State Attorneys General, or private party litigants. In these types of actions, the plaintiff may seek damages, statutory penalties, costs and/or attorneys' fees.

We have designed our solution to comply with these laws. To the extent that our solution is viewed by clients or potential clients as less functional, or more difficult to deploy or use, because of our solution's compliance features, we may lose market share to competitors that do not include similar compliance safeguards. Our contractual arrangements with our clients who use our solution to place calls also expressly require them to comply with all such laws and to indemnify us for any failure to do so. We take reasonable steps to confirm such compliance. Even with these efforts, it is possible that the FTC, FCC, private litigants or others may attempt to hold our clients, or us as a software solution provider, responsible for alleged violations of these laws. It also is possible that we may not successfully enforce or collect upon our contractual indemnities from our clients. Defending such suits can be costly and time-consuming and could result in fines, damages, expenses and losses. Additionally, these laws, and any changes to them or the interpretation thereof, that further restrict calling consumers, including to wireless phone numbers, adverse publicity regarding the alleged or actual failure by companies, including our clients and competitors, to comply with such laws or governmental or private enforcement actions related thereto, could result in a reduction in the use of our solution by our clients and potential clients, which could harm our business, financial condition, results of operations and cash flows.

On December 12, 2018, the FCC issued an order concluding that the Short Message Service, or SMS, or text messages, is an information service under federal law and not a telecommunications service. The regulatory significance to us is that the FCC's decision gives wireless carriers the flexibility to block SMS messages if the carriers identify the messages as unwanted by their wireless customers. Such blocking efforts by carriers may make it more difficult for our clients to use SMS messages that are provided by us as a part of our overall communications and outreach solution for our clients. Thus, although SMS comprises only a very small portion of our revenue base, its future availability as an effective tool for communication and outreach for our clients and their customers is uncertain and could cause our solution to be less valuable to clients and potential clients.

Increased taxes on our service may increase our clients' cost of using our service and/or increase our costs and reduce our profit margins to the extent the costs are not passed through to our clients, and we may be subject to liabilities for past sales and other taxes, surcharges and fees.

During 2011, we analyzed our activities and determined that we were obligated to collect sales taxes on sales of our subscription services in certain U.S. states. Accordingly, we registered with those states and, in 2012, commenced paying past-due amounts and collecting sales taxes from our clients and remitting such taxes to the applicable state taxing authorities. Prior to 2012, we did not collect or remit U.S. state or local sales, use, gross receipts, excise and utility user taxes, fees or surcharges on our solution. During the first quarter of 2015, we conducted an updated review of the taxability of sales of our subscription services and identified four additional U.S. states where we may be obligated to collect and remit sales taxes.

During 2013, we analyzed our activities and determined that we may be obligated to collect and remit sales, excise and utility user taxes, as well as surcharges as a communications service provider, and pay gross receipts taxes, on our usage-based fees in certain U.S. states and municipalities. We neither collected nor remitted state and local taxes or

surcharges on usage-based fees in any of the periods prior to 2014. Based on our ongoing assessment of our U.S. state and local tax collection and remittance obligations in respect of usage-based fees, in 2014, we

Table of Contents

registered for tax and regulatory purposes in all U.S. states where we determined such registration is proper and commenced collecting and remitting applicable state and local taxes and surcharges on such fees.

During 2016, we analyzed our activities and determined that we may be obligated to collect and remit sales, excise and utility user taxes on certain charges related to toll free service in certain U.S. states and municipalities. We neither collected nor remitted state or local taxes on such charges prior to December 2016. In the third quarter of 2016, we recorded an accrual for potential tax exposure related to toll free call charges for all periods open under the applicable statutes of limitations for assessment.

During 2018, we analyzed our activities and determined that we may be obligated to collect and remit sales tax on separately-stated service-based charges related to our subscription services. We neither collected nor remitted sales tax on such charges prior to September 2018. In the third quarter of 2018, we began collecting applicable taxes on such charges.

We have accrued a contingent liability of $1.1 million for our best estimate of the probable amount of taxes and surcharges that may be imposed by various states and municipalities on our activities, including our usage-based and subscription services, prior to registration. This contingent liability is based on our analysis of a number of factors, including the source location of our usage-based fees, the taxability of our subscription services and the rules and regulations in each state. The actual amount of state and local taxes and surcharges paid may differ from our estimates. See Note 10 to the consolidated financial statements.

While we have accrued for these potential liabilities in each period, such accruals are based on analyses of our business activities, the operation of our solution, applicable statutes, regulations and rules in each state and locality and estimates of sales subject to sales tax or other charges. State and local taxing and regulatory authorities may challenge our position and may decide to audit our business and operations with respect to state or local sales, use, gross receipts, excise and utility user taxes, fees or surcharges, which could result in our being liable for taxes, fees, or surcharges, as well as related penalties and interest, above our recorded accrued liability or additional liability for taxes, fees, or surcharges, as well as penalties and interest for our clients, which could harm our results of operations and our relationships with our clients. In addition, if our international sales grow, additional foreign countries may seek to impose sales or other tax collection obligations on us, which would increase our exposure to liability.

The applicability of state or local taxes, fees or surcharges relative to services such as ours is complex, ambiguous and subject to interpretation and change. If states enact new legislation or if taxing and regulatory authorities promulgate new rules or regulations or expand or otherwise alter their interpretations of existing rules and regulations, we could incur additional liabilities. In addition, the collection of additional taxes, fees or surcharges in the future could increase our prices or reduce our profit margins. Compliance with new or existing legislation, rules or regulations may also make us less competitive with those competitors who are not subject to, or choose not to comply with, such legislation, rules or regulations. We have incurred, and will continue to incur, substantial ongoing costs associated with complying with state or local tax, fee or surcharge requirements in the numerous markets in which we conduct or will conduct business.

Our ability to offer services outside the United States is subject to different regulatory and taxation requirements, which may be complicated and uncertain.

As we continue to expand the sale and implementation of our solutions internationally, we will be subject to additional regulations, taxes, surcharges and fees. Compliance with these new complex regulatory requirements differ from country to country, and are frequently changing and may impose substantial compliance burdens on our business. At times, it may be difficult to determine which laws and regulations apply and we may discover that we are required to comply with certain laws and regulations after having provided services for some time in that jurisdiction, which could subject us to retroactive taxes, fees and penalties, and we may be subject to conflicting requirements. For example, prior to 2016, we had not collected taxes on our sales in Canada. During the second quarter of 2015, we reviewed the taxability of our sales in Canada and determined that we were obligated to collect from our Canadian clients and remit such taxes to the Canadian federal government and certain provincial governments Value-added Taxes and/or Provincial Sales Taxes. We commenced collecting and remitting such taxes in January 2016.

Additionally, as we expand internationally, the risk that governments will regulate or impose new or increased taxes

or fees on our services increases. Any such additional regulation or taxes could decrease the value of our international expansion and harm our results of operations.

Table of Contents

We are subject to assessments for unpaid USF contributions, as well as interest thereon and civil penalties, due to our late registration and past failure to recognize our obligation as a USF contributor and as an international carrier.

We are classified as a telecommunications service provider for regulatory purposes and we are required to make direct contributions to the USF based on revenue we receive from the resale of interstate and international telecommunications services. In order to comply with the obligation to make direct contributions, we are registered with the Universal Service Administrative Company, or USAC, which is charged by the FCC with administering the USF, and have been remitting the required contributions to USAC since our registration with USAC in April 2013. However, we were also required to pay assessments for periods prior to our registration with the USAC. In this connection, we had recorded a disputed liability of $3.9 million related to our obligations for contributions for the period from 2008 to 2012. In January 2017, the FCC ruled in our favor with respect to most of the disputed amount. In September 2017, USAC issued a credit to us reflecting the FCC's ruling for the $3.1 million of the $3.9 million in disputed liability. In addition, USAC dropped its claim for interest and penalties related to the disputed liability of $3.1 million. The remaining $0.8 million in dispute involves USAC's assessment of liability for the period of 2003 through 2007, which was prior to the five year window during which we were required to maintain financial records for USF contribution purposes. In 2013, we filed a Request for Review (a form of appeal) of this disputed amount with the FCC, which remains pending. If the Request for Review is not resolved in our favor, it is possible that we will be required to pay the assessments relating to 2003 through 2007. As of December 31, 2018, we had accrued $0.9 million in respect of the remaining disputed assessments, including interest and penalties, for the period of 2003 through 2007. See Note 10 to the consolidated financial statements.

In June 2015, in connection with our late registration with the USAC and past failure to recognize our obligation as a USF contributor and as an international carrier from 2003 to 2012, we entered into a consent decree with the FCC Enforcement Bureau. In the consent decree, we agreed to pay a civil penalty of $2.0 million to the U.S. Treasury in twelve equal quarterly installments starting in July 2015 without interest. In the third quarter of 2014, we had accrued a $2.0 million liability for the then tentative civil penalty. As of December 31, 2018, we had paid all amounts due under the civil penalty. The consent decree also required us to comply with certain internal regulatory compliance monitoring, training and reporting requirements during a three year period, which ended in June 2018. Although we are no longer subject to the compliance, monitoring, training, and reporting requirements imposed by the consent decree, the FCC routinely imposes a higher expectation of regulatory compliance on companies that were previously subject to consent decrees and any further violations of FCC rules could subject us to heightened enforcement action, including higher fines and penalties. See Note 6 to the consolidated financial statements.

Our ongoing obligations to pay federal, state and local telecommunications contributions and taxes may decrease our price advantage over, and ability to compete with our competitors who are not subject to, or choose not to comply with, those requirements. In addition, if we are unable to continue to pass some or all of the cost of these contributions and taxes to our clients, our profit margins on the minutes we resell will decrease. Our federal contributions and tax obligations may significantly increase in the future, due to new interpretations by governing authorities, governmental budget pressures, changes in our business model or solutions or other factors.

If we do not comply with FCC rules and regulations, we could be subject to further FCC enforcement actions, fines, loss of licenses and possibly restrictions on our ability to operate or offer certain of our services.

Since our business is regulated by the FCC, we are subject to existing or potential FCC regulations relating to privacy, disability access, porting of numbers, USF contributions and other requirements. If we do not comply with FCC rules and regulations, we could be subject to further FCC enforcement actions, fines, loss of licenses and possibly restrictions on our ability to operate or offer certain of our services. Any further enforcement action by the FCC, which may be a public process, would hurt our reputation in the industry, could impair our ability to sell our services to clients and could harm our business and results of operations.

The regulations to which we are subject (in whole or in part) include:

- the Communications Assistance for Law Enforcement Act, or CALEA, which requires covered entities to assist law enforcement in undertaking electronic surveillance;
- contributions to the USF which requires that we pay a percentage of our revenues resulting from the provision of interstate telecommunications services to support certain federal programs;

- payment of annual FCC regulatory fees based on our interstate and international revenues;

Table of Contents

- rules pertaining to access to our services by people with disabilities and contributions to the Telecommunications Relay Services fund; and
- FCC rules regarding Customer Proprietary Network Information, or CPNI, which prohibit us from using such information without client approval, subject to certain exceptions.

If we do not comply with any current or future rules or regulations that apply to our business, we could be subject to additional and substantial fines and penalties, we may have to restructure our solutions, exit certain markets, accept lower margins or raise the price of our solutions, any of which could harm our business and results of operations.

Reform of federal and state USF programs could increase the cost of our service to our clients, diminishing or eliminating our pricing advantage.

The FCC and a number of states are considering reform or other modifications to USF programs. The way we calculate our contribution may change if the FCC or certain states engage in reform or adopt other modifications. In April 2012, the FCC released a Further Notice of Proposed Rulemaking to consider reforms to the manner in which companies like us contribute to the federal USF program. In general, the Further Notice of Proposed Rulemaking is considering questions like: what companies should contribute, how contributions should be assessed, and methods to improve the administration of the system. We cannot predict the outcome of this proceeding nor its impact on our business at this time.

Should the FCC or certain states adopt new contribution mechanisms or otherwise modify contribution obligations that increase our contribution burden, we will either need to raise the amount we currently collect from our clients to cover this obligation or absorb the costs, which would reduce our profit margins. Furthermore, the FCC has ruled that states can require us to contribute to state USF programs. A number of states already require us to contribute, while others are actively considering extending their programs to include the solution we provide. Currently our USF contributions are borne by our clients, which could result in our solution becoming less competitive as compared to products provided by our competitors.

Privacy concerns and domestic or foreign laws and regulations may reduce the demand for our solution, increase our costs and harm our business.

Our clients use our solution to collect, transfer, use, and otherwise process, or Process, personal data regarding their customers and potential customers. The Processing of personal data and other types of protected data subjects us and our customers to a number of domestic and international laws that govern and regulate the Processing of personal data and other types of protected data. These laws regulate and address a range of issues including data privacy (e.g., restrictions or technological or process requirements regarding the Processing of data), cybersecurity (e.g., requirements for the protection of personal data against compromise of the confidentiality, integrity, or availability of personal data), breach notification, data governance, and risk management and reporting. These laws can vary substantially from jurisdiction to jurisdiction, and are rapidly evolving. Domestic and international government authorities are considering adopting, or may adopt, laws and regulations in the future, regarding the Processing of personal data obtained from consumers and individuals.

Moreover, laws and regulations outside the United States, and particularly in the European Union, or EU, often are more restrictive than those in the United States. Such laws and regulations may have more stringent compliance obligations in regards to data protection. By way of example, under the EU General Data Protection Regulation, or GDPR, data subjects have the right to access, correct, and request deletion of personal data stored or maintained by companies subject to GDPR, such companies may have shorter timeframes and broader requirements for informing data protection authorities and individuals of security breaches that affect their personal data, and, in some cases, may be required to obtain individuals' consent to process personal data for certain purposes. We also may be bound by additional, more stringent contractual obligations relating to our collection, use, and disclosure of personal, financial, and other data. It is possible that a governmental authority may implement a new law or interpret an existing law in a manner that limits our customers' ability to use our solutions or that requires us to make costly or detrimental changes in our solutions and services, whether on a one-time basis or as an ongoing increase in our operating costs and expenses. Further, some laws might require us to disclose proprietary or confidential aspects of our solutions in a manner that compromises the effectiveness of our solutions or that enables our competitors or bad actors to gain insight into the operation of our technology, enabling them to copy or circumvent our solutions and thereby reducing

the value of our technology.

Table of Contents

The costs of compliance with, and other burdens imposed by, such laws and regulations that are applicable to us and the businesses of our clients may limit the use and adoption of our solution and reduce overall demand for our solution. Also, failure to comply with such laws may lead to significant fines, penalties or other regulatory liabilities, such as orders or consent decrees forcing us or our clients to modify business practices, and reputational damage or third-party lawsuits for any noncompliance with such laws. Our business could be harmed if legislation or regulations are adopted, interpreted or implemented in a manner that is inconsistent from country to country and inconsistent with our current policies and practices, or those of our clients.

Furthermore, privacy and data protection concerns may cause consumers to resist providing the personal data or other types of protected data that may be subject to laws and regulations that is necessary to allow our clients to use our solution effectively. Even the perception of privacy concerns, whether or not valid, may inhibit market adoption of our solution in certain industries or countries.

The European Union's GDPR could increase our costs and the costs of our clients to operate, limit the use of our solution or change the way we operate, expose us to substantial fines and penalties if we fail to comply, and lead to similar laws being enacted in other jurisdictions.

On May 25, 2018, the EU adopted the GDPR. The GDPR replaces the EU Data Protection Directive, also known as Directive 95/46/EC, and is intended to harmonize data protection laws throughout the EU by applying a single data protection law that is binding throughout each member state. We and many of our customers are subject to the GDPR based upon our processing of personal data collected from EU data subjects, such as our processing of personal data of our customers in the EU and our processing of our EU employees' personal data.

The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, expanded disclosures about how personal information is to be used, limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on services providers. Non-compliance with the GDPR can trigger steep fines of up to €20 million or 4% of total worldwide annual turnover, whichever is higher. The member states of the EU were tasked under the GDPR to enact certain implementing legislation that would add to or further interpret the GDPR requirements and this additional implementing legislation potentially extends our obligations and potential liability for failing to meet such obligations.

Given the breadth and depth of changes in data protection obligations, our compliance with the GDPR's requirements will continue to require time, resources and review of the technology and systems we use to satisfy the GDPR's requirements, including as EU member states continue to enact their legislation.

Among the compliance obligations the GDPR raises for us and our customers are requirements regarding the transfer of personal data from the EU to other jurisdictions, including the United States. In order to comply with the data transfer obligations imposed by the GDPR, we rely on the use of standard contractual clauses issued by the European Commission. Where applicable, we also enter into data processing agreements including standard contractual clauses approved by the Article 29 Working Party (now the Data Protection Board) to authorize the transfer of personal data from the EU and in support of our data processing activities on behalf of our customers. Recent litigation challenging the adequacy of the standard contractual clauses may negatively impact the operation of our business. The invalidation of the standard contractual clauses may require us to adopt costly or burdensome alternatives. It may be necessary to establish additional systems and business operations in the EU to avoid the transfer of personal data out of the EU. Such a change in the conduct of our business, may involve substantial expense and the diversion of resources from other aspects of our business, all of which may harm our business and results of operations.

Given the complexity of operationalizing the GDPR, the maturity level of proposed compliance frameworks and the relative lack of guidance in the interpretation of its numerous requirements, we and our customers are at risk of enforcement actions taken by EU data protection authorities or litigation from consumer advocacy groups acting on behalf of data subjects. This risk will likely remain until there is more guidance on the GDPR, including as to implementing legislation enacted by the member states and enforcement actions taken by various data protection authorities.

The implementation of the GDPR has led other jurisdictions to amend, or propose legislation to amend, their existing data protection laws to align with the requirements of the GDPR with the aim of obtaining an adequate level of data protection to facilitate the transfer of personal data from the EU. Accordingly, the challenges we face in the EU will

likely also apply to other jurisdictions outside the EU that adopt laws similar in construction to the GDPR or

Table of Contents

regulatory frameworks of equivalent complexity. For example, in 2018, the State of California adopted the California Consumer Privacy Act of 2018, or the CCPA. The CCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the GDPR. The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. As currently enacted, we and our customers will be required to comply with these requirements before the CCPA becomes effective on January 1, 2020.

Risks Related to Ownership of Our Common Stock

Our stock price has been volatile, may continue to be volatile and may decline, including due to factors beyond our control.

The market price of our common stock has been volatile in the past and may fluctuate significantly in the future in response to numerous factors, many of which are beyond our control. During the twelve months ended December 31, 2018, the sale price per share of our common stock ranged from a low of $22.55 to a high of $49.50. Factors that may contribute to continuing volatility in the price of our common stock include:

- actual or anticipated fluctuations in our operating results;
- the financial projections we provide to the public, any changes in these projections or our failure to meet these projections;
- failure of securities analysts to initiate or maintain coverage of our company, changes in financial estimates by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- ratings changes by any securities analysts who follow our company;
- sales of our common stock (or securities that convert to our common stock) by us or our significant stockholders, or the public announcement of same;
- the assessment of our business or position in our market published in research and other reports;
- announcements by us or our competitors of significant product or technical innovations, financings, acquisitions, strategic partnerships, joint ventures or capital commitments;
- entry into the market by new competitors, or the introduction of new products or the generation of new sales by us or our competitors;
- changes in operating performance and stock market valuations of other technology companies generally, or those in the software as a service industry in particular;
- price and volume fluctuations in the overall stock market, including as a result of trends in the U.S. or global economy;
- any major change in our board of directors or management;
- lawsuits threatened or filed against us;
- security breaches or incidents impacting our clients or their customers and security breaches of companies that provide solutions similar to our solution, which could negatively impact our industry as a whole;
- legislation or regulation of our business, the internet and/or contact centers;
- loss of key personnel;
- new entrants into the contact center market, including the transition by providers of legacy on-premise contact center systems to cloud solutions;
- the perceived or real impact of events that harm our direct competitors;
- developments with respect to patents or proprietary rights;
- general market conditions; and
- other events or factors, including those resulting from war, incidents of terrorism or responses to these events, which would be unrelated to our business and industry, and outside of our control.

In addition, stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many technology companies. Stock prices of many

41

Table of Contents

technology companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. These and other factors may disproportionately impact the trading price of our common stock. In the past, stockholders have instituted securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business and harm our business, results of operations, financial condition, reputation and cash flows.

If securities or industry analysts discontinue publishing research or reports about our business, or publish negative reports about our business, our share price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business, our market and our competitors. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or change their opinion of our shares or our business, 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 financial markets or our industry market, which could cause our share price or trading volume to decline.

Substantial future sales of shares of our common stock could cause the market price of our common stock to decline.

The market price of shares of our common stock could decline as a result of substantial sales of our common stock, particularly sales by our directors, executive officers and significant stockholders or the perception in the market that holders of a large number of shares intend to sell their shares.

The future registration of shares of our common stock may cause our stock price to decline, even before such shares are actually sold in the market. We have registered shares of common stock that we may issue under our employee equity incentive plans. These shares can be sold freely in the public market upon issuance.

We are unable to predict the effect that sales, or the perception that our shares may be available for sale, will have on the prevailing market price of our common stock.

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

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws 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:

- provide that our board of directors is classified into three classes of directors;
- provide that stockholders may remove directors only for cause and only with the approval of holders of at least 66 ⅔% of our then outstanding capital stock;
- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- provide that our stockholders may not take action by written consent, and may only take action at annual or special meetings of our stockholders;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice;
- restrict the forum for certain litigation against us to Delaware;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors; and

Table of Contents

provide that stockholders will be permitted to amend our amended and restated bylaws only upon receiving at least $66^{2}/_{3}\%$ of the votes entitled to be cast by holders of all outstanding shares then entitled to vote generally in the election of directors, voting together as a single class.

These provisions 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.

The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware is 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 fiduciary duty owed by any of our directors, officers or other employees to us or to our stockholders, (3) any action asserting a claim arising pursuant to the Delaware General Corporation Law or (4) any action asserting a claim governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

We have never paid cash dividends and do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, including under any future loan facilities, general business conditions and other factors that our board of directors may deem relevant. While our convertible senior notes do not prohibit payment of dividends, any dividends declared and paid by our board of directors would result in an adjustment to the conversion rate of such notes such that additional shares would be issuable upon conversion. Accordingly, holders of our common stock must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Risks Related to Ownership of Our Convertible Senior Notes

Servicing our debt may require a significant amount of cash. We may not have sufficient cash flow from our business to pay our indebtedness, and we may not have the ability to raise the funds necessary to settle for cash conversions of the convertible senior notes or to repurchase the convertible senior notes for cash upon a fundamental change, which could adversely affect our business and results of operations.

In May 2018, we issued $258.8 million in aggregate principal amount of convertible senior notes in a private offering. The interest rate is fixed at 0.125% per annum and is payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2018. Our ability to make scheduled payments of principal, interest, or to refinance our indebtedness, including the convertible senior notes, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flows from operations in the future that are sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flows, we may be required to adopt one or more alternatives,

43

Table of Contents

such as selling assets, restructuring debt or obtaining additional debt financing or equity capital on terms that may be onerous or highly dilutive. Our ability to refinance any future indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

Subject to certain conditions, holders of the convertible senior notes have the right to require us to repurchase for cash all or any portion of their convertible senior notes upon the occurrence of a fundamental change (as defined in the indenture governing the convertible senior notes) at a fundamental change repurchase price equal to 100% of the principal amount of the convertible senior notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date. Upon conversion, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to settle a portion or all of our conversion obligation through the payment of cash. We may not have enough available cash or be able to obtain financing at the time we are required to make repurchases in connection with such conversion and our ability to pay may additionally be limited by law, regulatory authority or agreements governing our future indebtedness. Our failure to repurchase the convertible senior notes at a time when the repurchase is required by the indenture governing the convertible senior notes or to pay any cash payable on future conversions as required by such indenture would constitute a default under such indenture. A default under the indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the convertible senior notes or make cash payments upon conversions thereof.

The conditional conversion feature of the convertible senior notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the convertible senior notes is triggered, holders of convertible senior notes will be entitled to convert the convertible senior notes at any time during specified periods at their option. If one or more holders elect to convert their convertible senior notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we will be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their convertible senior notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the convertible senior notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

Transactions relating to our convertible senior notes may affect the value of our common stock.

The conversion of some or all of the convertible senior notes would dilute the ownership interests of existing stockholders to the extent we satisfy our conversion obligation by delivering shares of our common stock upon any conversion of such convertible senior notes. Our convertible senior notes may become convertible at the option of their holders under certain circumstances. If holders of our convertible senior notes elect to convert their convertible senior notes, we may settle our conversion obligation by delivering to them a significant number of shares of our common stock, which would cause dilution to our existing stockholders.

In addition, in connection with the issuance of the convertible senior notes, we entered into capped call transactions with certain financial institutions (the “Option Counterparties”). The capped call transactions are expected generally to reduce the potential dilution to our common stock upon any conversion or settlement of the convertible senior notes and/or offset any cash payments we are required to make in excess of the principal amount of converted convertible senior notes, as the case may be, with such reduction and/or offset subject to a cap based on the cap price. From time to time, the Option Counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivative transactions with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the convertible senior notes. This activity could cause a decrease in the market price of our common stock.

Table of Contents

The accounting method for convertible debt securities that may be settled in cash, such as the convertible senior notes, could have a material effect on our reported financial results.

Under Financial Accounting Standards Board Accounting Standards Codification 470-20, Debt with Conversion and Other Options ("ASC 470-20"), an entity must separately account for the liability and equity components of convertible debt instruments (such as the convertible senior notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. ASC 470-20 requires the value of the conversion option of the convertible senior notes, representing the equity component, to be recorded as additional paid-in capital within stockholders' equity in our consolidated balance sheet and as a discount to the convertible senior notes, which reduces their initial carrying value. The carrying value of the convertible senior notes, net of the discount recorded, will be accreted up to the principal amount of the convertible senior notes from the issuance date until maturity, which will result in non-cash charges to interest expense in our consolidated statement of operations. Accordingly, we will report lower net income or higher net loss in our financial results because ASC 470-20 requires interest to include both the current period's accretion of the debt discount and the instrument's coupon interest, which could adversely affect our reported or future financial results, the trading price of our common stock and the trading price of the convertible senior notes.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

We currently lease approximately 109,500 square feet of office space worldwide. Information concerning our principal leased properties as of December 31, 2018 is set forth below:

Location	Principal Use	Square Footage	Lease Expiration Date
San Ramon, California	Corporate headquarters, sales, marketing, product design, professional services, research and development	79,600	March 2021
The Philippines	Technical support, training and other professional services	16,500	March, 2020
Russia	Software development	13,400	December 2019

The hosting of our equipment and software at co-located third-party facilities is also significant to our business. We have entered into rental agreements with third-party facilities in Santa Clara, California; Atlanta, Georgia; Slough, England; and Amsterdam, the Netherlands, which require monthly payments for a fixed period of time in exchange for certain guarantees of space, network and telecommunication availability. These agreements expire at various dates through 2021.

We believe our facilities are sufficient for our current needs.

ITEM 3. Legal Proceedings

Information with respect to this item may be found under the heading "Legal Matters" in Note 10 of the Notes to Consolidated Financial Statements in this Annual Report on Form 10-K, which information is incorporated herein by reference.

ITEM 4. Mine Safety Disclosures

Not applicable.

Table of Contents

PART II

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

Stock Price

Our common stock trades on The NASDAQ Global Market, or NASDAQ, under the symbol "FIVN." The following table sets forth, for the periods indicated, the high and low reported sales prices of our common stock as reported by NASDAQ.

	High	Low
Year 2018		
First quarter	$32.47	$22.55
Second quarter	39.55	26.92
Third quarter	49.50	31.64
Fourth quarter	45.58	34.66
Year 2017		
First quarter	$18.93	$14.00
Second quarter	24.80	16.30
Third quarter	23.93	19.53
Fourth quarter	27.81	22.51

Number of Common Stock Holders

On February 15, 2019, there were 34 stockholders of record of our common stock who held an aggregate of 59,253,048 shares of our common stock. We believe that there are a substantially greater number of beneficial owners of our common stock.

Dividend Policy

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. In addition, while our convertible senior notes do not prohibit payment of dividends, any dividends declared and paid by our board of directors would result in an adjustment to the conversion rate of such notes such that additional shares would be issuable upon conversion. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, including under any future loan facilities, general business conditions and other factors that our board of directors may deem relevant.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Stock Performance Graph

The graph below compares the cumulative total return on our common stock with that of the Russell 2000 Index and the NASDAQ Computer and Data Processing Index. The period shown commences on April 4, 2014 and ends on December 31, 2018. The graph assumes $100 was invested at the close of market on April 4, 2014 in the common stock of Five9, the Russell 2000 Index and the NASDAQ Computer and Data Processing Index, and

Table of Contents

assumes the reinvestment of any dividends. The stock price performance on the following graph is not intended to forecast or be indicative of future stock price performance of our common stock.

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of Five9, Inc. under the Securities Act of 1933, as amended, or the Securities Act of 1934 Exchange, as amended.

ITEM 6. Selected Financial Data

The following selected consolidated statement of operations data for the years ended December 31, 2018, 2017 and 2016 and the selected consolidated balance sheet data as of December 31, 2018 and 2017 are derived from our audited consolidated financial statements included elsewhere in this Form 10-K. The following selected consolidated statement of operations data for the years ended December 31, 2015 and 2014 and the selected consolidated balance sheet data as of December 31, 2016, 2015 and 2014 are derived from our audited consolidated financial statements that are not included in this report.

Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the following selected financial data in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," our consolidated financial statements, related notes, and other financial information included elsewhere in this Form 10-K.

Table of Contents

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands, except per share data)				
Revenue	$257,664	$200,225	$162,090	$128,868	$103,102
Cost of revenue[1][2]	104,034	83,104	66,934	59,495	54,661
Gross profit	153,630	117,121	95,156	69,373	48,441
Operating expenses:					
Research and development [1][2]	34,172	27,120	23,878	22,659	22,110
Sales and marketing [1][2]	72,001	66,570	52,748	42,042	37,445
General and administrative [1][2]	40,448	29,151	25,072	25,822	24,416
Total operating expenses	146,621	122,841	101,698	90,523	83,971
Income (loss) from operations	7,009	(5,720)	(6,542)	(21,150)	(35,530)
Other income (expense), net:					
Extinguishment of debt	—	—	(1,026)	—	—
Interest and other	(6,930)	(2,981)	(4,238)	(4,627)	(3,916)
Change in fair value of convertible preferred and common stock warrant liabilities	—	—	—	—	1,745
Total other income (expense), net	(6,930)	(2,981)	(5,264)	(4,627)	(2,171)
Income (loss) before income taxes	79	(8,701)	(11,806)	(25,777)	(37,701)
Provision for income taxes	300	268	54	61	85
Net loss	$(221)	$(8,969)	$(11,860)	$(25,838)	$(37,786)
Net loss per share:					
Basic and diluted	$—	$(0.16)	$(0.23)	$(0.52)	$(1.00)
Shares used in computing net loss per share:					
Basic and diluted	58,076	54,946	52,342	50,141	37,604

(1) Depreciation and amortization expenses included in our results of operations are as follows (in thousands):

	Year Ended December 31,				
	2018	2017	2016	2015	2014
Cost of revenue	$7,808	$6,300	$6,573	$5,950	$5,138
Research and development	1,036	795	737	455	229
Sales and marketing	95	120	221	206	196
General and administrative	1,335	1,099	859	777	900
Total depreciation and amortization	$10,274	$8,314	$8,390	$7,388	$6,463

(2) Stock-based compensation expense is included in our results of operations as follows (in thousands):

	Year Ended December 31,				
	2018	2017	2016	2015	2014
Cost of revenue	$3,333	$2,202	$1,375	$866	$542
Research and development	5,303	3,042	2,059	1,790	1,931
Sales and marketing	6,307	4,364	2,363	1,800	1,510
General and administrative	13,541	5,735	3,846	3,274	2,770
Total stock-based compensation	$28,484	$15,343	$9,643	$7,730	$6,753

Table of Contents

	December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable investments	$291,819	$68,947	$58,122	$58,484	$78,289
Working capital	286,008	53,317	40,933	22,712	56,234
Total assets	394,666	128,196	105,239	99,233	116,934
Total debt and capital leases	207,919	46,742	45,799	46,617	47,696
Additional paid-in capital	294,279	222,202	196,555	180,649	170,286
Total stockholders' equity	142,748	46,838	30,328	26,280	41,753

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

You should read the following discussion in conjunction with the consolidated financial statements and notes thereto included elsewhere in this report.

Overview

We are a pioneer and leading provider of cloud software for contact centers, facilitating more than five billion call minutes between our more than 2,000 clients and their customers per year. We believe we achieved this leadership position through our expertise and technology, which has empowered us to help organizations of all sizes transition from legacy on-premise contact center systems to our cloud solution. Our solution, which is comprised of our VCC cloud platform and applications, allows simultaneous management and optimization of customer interactions across voice, chat, email, web, social media and mobile channels, either directly or through our APIs. Our VCC cloud platform routes each customer interaction to an appropriate agent resource, and delivers relevant customer data to the agent in real time to optimize the customer experience. Unlike legacy on-premise contact center systems, our solution requires minimal up-front investment and can be rapidly deployed and adjusted depending on our client's requirements.

Since founding our business in 2001, we have focused exclusively on delivering cloud contact center software. We initially targeted smaller contact center opportunities with our telesales team and, over time, invested in expanding the breadth and depth of the functionality of our cloud platform to meet the evolving requirements of our clients. In 2009, we made a strategic decision to expand our market opportunity to include larger contact centers. This decision drove further investments in research and development and the establishment of our field sales team to meet the requirements of these larger contact centers. We believe this shift has helped us diversify our client base, while significantly enhancing our opportunity for future revenue growth. To complement these efforts, we have also focused on building client awareness and driving adoption of our solution through marketing activities, which include internet advertising, digital marketing campaigns, social media, trade shows, industry events and telemarketing.

We provide our solution through a SaaS business model with recurring subscriptions. We offer a comprehensive suite of applications delivered on our VCC cloud platform that are designed to enable our clients to manage and optimize interactions across inbound and outbound contact centers. We primarily generate revenue by selling subscriptions and related usage of our VCC cloud platform. We charge our clients monthly subscription fees for access to our solution, primarily based on the number of agent seats, as well as the specific functionalities and applications our clients deploy. We define agent seats as the maximum number of named agents allowed to concurrently access our solution. Our clients typically have more named agents than agent seats, and multiple named agents may use an agent seat, though not simultaneously. Substantially all of our clients purchase both subscriptions and related telephony usage from us. A small percentage of our clients subscribe to our platform but purchase telephony usage directly from wholesale telecommunications service providers. We do not sell telephony usage on a stand-alone basis to any client. The related usage fees are based on the volume of minutes for inbound and outbound interactions. We also offer bundled plans, generally for smaller deployments, where the client is charged a single monthly fixed fee per agent seat that includes both subscription and unlimited usage in the contiguous 48 states and, in some cases, Canada. We offer monthly, annual and multiple-year contracts to our clients, generally with 30 days'

49

Table of Contents

notice required for changes in the number of agent seats. Our clients can use this notice period to rapidly adjust the number of agent seats used to meet their changing contact center volume needs, including to reduce the number of agent seats to zero. As a general matter, this means that a client can effectively terminate its agreement with us upon 30 days' notice. Our larger clients typically choose annual contracts, which generally include an implementation and ramp period of several months. Fixed subscription fees, including bundled plans, are generally billed monthly in advance, while related usage fees are billed in arrears. For the years ended December 31, 2018, 2017 and 2016, subscription and related usage fees accounted for 93%, 94% and 95% of our revenue, respectively. The remainder was comprised of professional services revenue from the implementation and optimization of our solution.

Key GAAP Operating Results

Our revenue increased to $257.7 million for the year ended December 31, 2018, from $200.2 million and $162.1 million for the years ended December 31, 2017 and 2016, respectively. Revenue growth has primarily been driven by our larger clients increasing their number of agent seats. For each of the years ended December 31, 2018, 2017 and 2016, no single client accounted for more than 10% of our total revenue. As of December 31, 2018, we had over 2,000 clients across multiple industries. Our clients' subscriptions generally range in size from fewer than 10 agent seats to approximately 3,000 agent seats. We had a net loss of $0.2 million, $9.0 million and $11.9 million for the years ended December 31, 2018, 2017 and 2016, respectively.

We have continued to make significant expenditures and investments, including in sales and marketing, research and development and infrastructure. We primarily evaluate the success of our business based on revenue growth and the efficiency and effectiveness of our investments. The growth of our business and our future success depend on many factors, including our ability to continue to expand our client base to include larger opportunities, grow revenue from our existing client base, innovate and expand internationally. While these areas represent significant opportunities for us, they also pose risks and challenges that we must successfully address in order to sustain the growth of our business and improve our operating results. In order to pursue these opportunities, we anticipate that we will continue to expand our operations and headcount in the near term.

Due to our continuing investments to grow our business, increase our sales and marketing efforts, pursue new opportunities, enhance our solution and build our technology, we expect our cost of revenue and operating expenses to increase in absolute dollars in future periods. However, we expect these expenses to decrease as a percentage of revenue as we grow our revenue and gain economies of scale by increasing our client base without direct incremental development costs and by utilizing more of the capacity of our data centers.

Key Operating and Non-GAAP Financial Performance Metrics

In addition to measures of financial performance presented in our consolidated financial statements, we monitor the key metrics set forth below to help us evaluate growth trends, establish budgets, measure the effectiveness of our sales and marketing efforts and assess operational efficiencies.

Annual Dollar-Based Retention Rate

We believe that our Annual Dollar-Based Retention Rate provides insight into our ability to retain and grow revenue from our clients, and is a measure of the long-term value of our client relationships. Our Annual Dollar-Based Retention Rate is calculated by dividing our Retained Net Invoicing by our Retention Base Net Invoicing on a monthly basis, which we then average using the rates for the trailing twelve months for the period being presented. We define Retention Base Net Invoicing as recurring net invoicing from all clients in the comparable prior year period, and we define Retained Net Invoicing as recurring net invoicing from that same group of clients in the current period. We define recurring net invoicing as subscription and related usage revenue excluding the impact of service credits, reserves and deferrals. Historically, the difference between recurring net invoicing and our subscription and related usage revenue has been within 10%.

The following table shows our Annual Dollar-Based Retention Rate for the periods presented:

	Twelve Months Ended December 31,		
	2018	2017	2016
Annual Dollar-Based Retention Rate	103%	98%	100%

Our Dollar-Based Retention Rate improved from 2017 to 2018 primarily due to our larger clients increasing their number of agent seats.

Table of Contents

Adjusted EBITDA

We monitor adjusted EBITDA, a non-GAAP financial measure, to analyze our financial results and believe that it is useful to investors, as a supplement to U.S. GAAP measures, in evaluating our ongoing operational performance and enhancing an overall understanding of our past financial performance. We believe that adjusted EBITDA helps illustrate underlying trends in our business that could otherwise be masked by the effect of the income or expenses that we exclude from adjusted EBITDA. Furthermore, we use this measure to establish budgets and operational goals for managing our business and evaluating our performance. We also believe that adjusted EBITDA provides an additional tool for investors to use in comparing our recurring core business operating results over multiple periods with other companies in our industry.

Adjusted EBITDA should not be considered in isolation from, or as a substitute for, financial information prepared in accordance with U.S. GAAP, and our calculation of adjusted EBITDA may differ from that of other companies in our industry. We compensate for the inherent limitations associated with using adjusted EBITDA through disclosure of these limitations, presentation of our financial statements in accordance with U.S. GAAP and reconciliation of adjusted EBITDA to the most directly comparable U.S. GAAP measure, net loss. We calculate adjusted EBITDA as net loss before (1) depreciation and amortization, (2) stock-based compensation, (3) interest income, expense and other, (4) provision for income taxes, and (5) other items that do not directly affect what we consider to be our core operating performance.

The following table shows a reconciliation of net loss to adjusted EBITDA for the periods presented (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Net loss	$(221)	$(8,969)	$(11,860)
Non-GAAP adjustments:			
Depreciation and amortization [1]	10,274	8,314	8,390
Stock-based compensation [2]	28,484	15,343	9,643
Extinguishment of debt	—	—	1,026
Interest expense	10,245	3,471	4,226
Interest (income) and other	(3,315)	(490)	12
Legal settlement [3]	—	1,700	—
Legal and indemnification fees related to settlement	592	135	—
Reversal of interest and penalties on accrued federal fees [4]	—	(2,133)	—
Reversal of accrued federal fees [5]	—	—	(3,114)
Provision for income taxes	300	268	54
Adjusted EBITDA	$46,359	$17,639	$8,377

(1) See ITEM 6 of this Form 10-K for depreciation and amortization expenses included in our results of operations for the periods presented.

(2) See Note 7 to the consolidated financial statements for stock-based compensation expense included in our results of operations for the periods presented.

(3) See “Legal Matters” in Note 10 to the consolidated financial statements for additional information.

(4) Included in general and administrative expense. Amount represents the reversal of accrued interest and penalties related to the Universal Services Fund, or USF, liability following a favorable ruling from the FCC’s Wireline Competition Bureau. See Note 10 to the consolidated financial statements for additional information.

(5) Included in cost of revenue. Amount represents a credit recorded in the fourth quarter of 2016 following a favorable ruling from the FCC’s Wireline Competition Bureau. See Note 10 to the consolidated financial statements for additional information.

Table of Contents

Key Components of Our Results of Operations

Revenue

Our revenue consists of subscription and related usage as well as professional services. We consider our subscription and related usage to be recurring revenue. This recurring revenue includes fixed subscription fees for the delivery and support of our VCC cloud platform, as well as related usage fees. The related usage fees are based on the volume of minutes for inbound and outbound client interactions. We also offer bundled plans, generally for smaller deployments, where the client is charged a single monthly fixed fee per agent seat that includes both subscription and unlimited usage in the contiguous 48 states and, in some cases, Canada. We offer monthly, annual and multiple-year contracts for our clients, generally with 30 days' notice required for changes in the number of agent seats. Our clients can use this notice period to rapidly adjust the number of agent seats used to meet their changing contact center volume needs, including to reduce the number of agent seats to zero. As a general matter, this means that a client can effectively terminate its agreement with us upon 30 days' notice.

Fixed subscription fees, including plans with bundled usage, are generally billed monthly in advance, while variable usage fees are billed in arrears. Fixed subscription fees are recognized on a straight-line basis over the applicable term, predominantly the monthly contractual billing period. Support activities include technical assistance for our solution and upgrades and enhancements on a when and if available basis, which are not billed separately. Variable subscription related usage fees for non-bundled plans are billed in arrears based on client-specific per minute rate plans and are recognized as actual usage occurs. We generally require advance deposits from clients based on estimated usage. All fees, except usage deposits, are non-refundable.

In addition, we generate professional services revenue from assisting clients in implementing our solution and optimizing use. These services include application configuration, system integration and education and training services. Professional services are primarily billed on a fixed-fee basis and are typically performed by us directly. In limited cases, our clients choose to perform these services themselves or engage their own third-party service providers to perform such services. Professional services are recognized as the services are performed using the proportional performance method, with performance measured based on labor hours, provided all other criteria for revenue recognition are met.

The adoption of ASC 606, the new revenue recognition guidance, in January 2018, did not have a material impact on the recognition or timing of revenue. See Note 2 to the consolidated financial statements for additional information.

Cost of Revenue

Our cost of revenue consists primarily of personnel costs, including stock-based compensation, fees that we pay to telecommunications providers for usage, USF contributions and other regulatory costs, depreciation and related expenses of the servers and equipment, costs to build out and maintain co-location data centers, and allocated office and facility costs and amortization of acquired technology. Cost of revenue can fluctuate based on a number of factors, including the fees we pay to telecommunications providers, which vary depending on our clients' usage of our VCC cloud platform, the timing of capital expenditures and related depreciation charges and changes in headcount. We expect to continue investing in our network infrastructure and operations and client support function to maintain high quality and availability of service, resulting in absolute dollar increases in cost of revenue. As our business grows, we expect to realize economies of scale in network infrastructure, personnel and client support.

Operating Expenses

We classify our operating expenses as research and development, sales and marketing and general and administrative expenses.

Research and Development. Our research and development expenses consist primarily of salary and related expenses, including stock-based compensation, for personnel related to the development of improvements and expanded features for our services, as well as quality assurance, testing, product management and allocated overhead. We expense research and development expenses as they are incurred except for internal use software development costs that qualify for capitalization. We believe that continued investment in our solution is important for our future growth, and we expect our research and development expenses to increase at a faster rate in 2019 than in the past, and to increase as a percentage of revenue.

52

Table of Contents

Sales and Marketing. Sales and marketing expenses consist primarily of salaries and related expenses, including stock-based compensation, for personnel in sales and marketing, sales commissions, as well as advertising, marketing, corporate communications, travel costs and allocated overhead. Prior to the adoption of ASC 606, we expensed sales commissions associated with the acquisition of client contracts as incurred in the period the contract was acquired. Upon the adoption of ASC 606 in January 2018, a significant amount of our sales commission expenses have been deferred, as required by ASC 340-40, Other Assets and Deferred Costs - Contracts with Customers ("ASC 340-40"), over an expected benefit period, which we have determined to be five years. See Note 2 to the consolidated financial statements for additional information. We believe it is important to continue investing in sales and marketing to continue to generate revenue growth. Accordingly, we expect sales and marketing spend to increase in absolute dollars and fluctuate as a percentage of revenue as we continue to support our growth initiatives.

General and Administrative. General and administrative expenses consist primarily of salary and related expenses (including stock-based compensation) for management, finance and accounting, legal, information systems and human resources personnel, professional fees, compliance costs, other corporate expenses and allocated overhead. We expect that general and administrative expenses will fluctuate in absolute dollars from period to period but decline as a percentage of revenue over time.

Results of Operations for the Years Ended December 31, 2018, 2017 and 2016

Based on the consolidated statements of operations and comprehensive loss set forth in this annual report, the following table sets forth our operating results as a percentage of revenue for the periods indicated:

	Year Ended December 31,		
	2018	2017	2016
Revenue	100 %	100 %	100 %
Cost of revenue	40 %	42 %	41 %
Gross profit	60 %	58 %	59 %
Operating expenses:			
Research and development	13 %	14 %	15 %
Sales and marketing	28 %	32 %	32 %
General and administrative	16 %	15 %	16 %
Total operating expenses	57 %	61 %	63 %
Income (loss) from operations	3 %	(3)%	(4)%
Other income (expense), net:			
Extinguishment of debt	— %	— %	(1)%
Interest expense	(4)%	(2)%	(2)%
Interest income and other	1 %	1 %	— %
Total other income (expense), net	(3)%	(1)%	(3)%
Income (loss) before income taxes	— %	(4)%	(7)%
Provision for income taxes	— %	— %	— %
Net loss	— %	(4)%	(7)%

Comparison of the Years Ended December 31, 2018 and 2017

Revenue

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
Revenue	$257,664	$200,225	$57,439	29%

The increase in revenue for 2018 compared to 2017 was primarily attributable to our larger clients increasing their number of agent seats, driven by an increase in our sales and marketing activities and our improved brand

53

Table of Contents

awareness. The adoption of ASC 606 in January 2018 did not have a material impact on the recognition or timing of revenue.

Cost of Revenue

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
Cost of revenue	$104,034	$83,104	$20,930	25%
% of Revenue	40%	42%		

The increase in cost of revenue for 2018 compared to 2017 was primarily due to a $6.9 million increase in third party hosted software costs driven by increased client activities, a $6.5 million increase in personnel costs, including stock-based compensation costs, driven by increased headcount and a higher fair value of employee equity awards due primarily to our increased stock price, and a $2.7 million increase in depreciation and data center costs, driven by increased capital expenditures to support our growing capacity needs and continuing expansion of our existing data center facilities, and a $2.4 million increase in USF contributions and other federal telecommunication service fees due primarily to increased client usage.

Gross Profit

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
Gross profit	$153,630	$117,121	$36,509	31%
% of Revenue	60%	58%		

The increase in gross profit for 2018 compared to 2017 was primarily due to increases in subscription and related usage revenues as a result of an increased number of agent seats by our larger clients. The increase in gross margin for 2018 compared to 2017 was primarily due to improved efficiencies in our provision of professional services, realization of economies of scale for subscriptions and improved efficiencies in usage.

Operating Expenses

Research and Development

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
Research and development	$34,172	$27,120	$7,052	26%
% of Revenue	13%	14%		

The increase in research and development expenses for 2018 compared to 2017 was primarily due to a $3.8 million increase in cash-based personnel-related costs driven mainly by increased headcount and a $2.3 million increase due to an incremental stock-based compensation cost due to the modification of certain stock-based awards of a former executive of our company in the third quarter of 2018 and a higher fair value of employee equity awards due primarily to our increased stock price.

Sales and Marketing

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			

Sales and marketing	$72,001	$66,570	$5,431	8%
% of Revenue	28%	32%		

Table of Contents

The increase in sales and marketing expenses for 2018 compared to 2017 was primarily due to a $6.6 million increase in personnel-related costs, including stock-based compensation costs, driven mainly by increased headcount and a higher fair value of employee equity awards due primarily to our increased stock price, the execution of our growth strategy to acquire new clients, increase the number of agent seats within our existing client base, and establish brand awareness, offset in part by a $3.7 million decrease in sales commission expense resulting from the adoption of ASC 606 in January 2018. ASC 606 requires us to capitalize incremental costs of obtaining contracts with customers, which consist primarily of sales commissions. Accordingly, under ASC 606, our sales commission expense for 2018 decreased by approximately $7.7 million. See Note 2 to the consolidated financial statements for additional information.

General and Administrative

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
General and administrative	$40,448	$29,151	$11,297	39%
% of Revenue	16%	15%		

The increase in general and administrative expenses for 2018 compared to 2017 was primarily due to a $7.8 million increase in stock-based compensation costs mainly due to a higher fair value of employee equity awards driven by our increased stock price and a $2.6 million increase in cash-based personnel-related costs due to increased headcount. General and administrative expenses for 2017 included a $2.1 million reversal of interest and penalties on the accrued federal fees following a favorable ruling from the FCC's Wireline Competition Bureau. Legal costs in 2018 compared to 2017 decreased due to a dispute settlement of $1.7 million related to the Melcher litigation in the first quarter of 2017.

Other Income (Expense), Net

	Year Ended December 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
Interest expense	$(10,245)	$(3,471)	$(6,774)	(195)%
Interest income and other	3,315	490	2,825	(577)%
Total other income (expense), net	$(6,930)	$(2,981)	$(3,949)	(132)%
% of Revenue	(3)%	(1)%		

The unfavorable change of $(3.9) million in other income (expense), net for 2018 compared to 2017 was primarily due to $8.1 million in interest expense related to our convertible senior notes, offset in part by higher interest income on our marketable investments as a result of investment of the proceeds from our convertible senior notes, and a $0.3 million gain from the sale of our convertible note held for investment. See Note 3 to the consolidated financial statements for additional information.

Comparison of the Years Ended December 31, 2017 and 2016

Revenue

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Revenue	$200,225	$162,090	$38,135	24%

The increase in revenue for 2017 compared to 2016 was primarily attributable to our larger clients, driven by an increase in our sales and marketing activities and our improved brand awareness.

Table of Contents

Cost of Revenue

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Cost of revenue	$83,104	$66,934	$16,170	24%
% of Revenue	42%	41%		

The increase in cost of revenue for 2017 compared to 2016 was primarily due to a $7.0 million increase in personnel costs including stock-based compensation costs, driven by increased headcount and higher fair value of employee equity awards due mainly to our increased stock price, and a $3.1 million reversal of accrued USF charges recorded in 2016 resulted from a favorable ruling from the FCC's Wireless Competition Bureau. See Note 10 to the consolidated financial statements for more information. The increase was also driven by a $2.5 million increase in third party hosted software costs, a $1.9 million increase in data center costs, and a $0.9 million increase in USF contributions and other federal telecommunication service fees, all of which were due primarily to increased client activities. The $1.5 million increase in facility-related and overhead allocation costs also contributed to the increase in cost of revenue.

Gross Profit

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Gross profit	$117,121	$95,156	$21,965	23%
% of Revenue	58%	59%		

The increase in gross profit for 2017 compared to 2016 was primarily due to increases in subscription and higher amounts charged for, and better efficiencies in, professional services. The slight decrease in gross margin for 2017 compared to 2016 was primarily attributable to higher stock-based compensation costs due mainly to an increase in the fair value of employee equity awards driven by our increased stock price.

Operating Expenses

Research and Development

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Research and development	$27,120	$23,878	$3,242	14%
% of Revenue	14%	15%		

The increase in research and development expenses for 2017 compared to 2016 was primarily due to a $1.9 million increase in cash-based personnel-related cost driven by increased headcount and a $1.0 million increase in stock-based compensation costs mainly due to higher fair value of employee equity awards driven by our increased stock price.

Sales and Marketing

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Sales and marketing	$66,570	$52,748	$13,822	26%
% of Revenue	32%	32%		

The increase in sales and marketing expenses for 2017 compared to 2016 was primarily due to a $4.8 million increase in cash-based personnel costs driven by increased headcount, a $3.8 million increase in commissions paid

Table of Contents

to sales personnel driven by growth in sales and bookings of our solution, a $2.0 million increase in stock-based compensation costs mainly due to higher fair value of employee equity awards driven by our increased stock price, a $1.0 million increase in discretionary and other marketing-related expenses, and a $0.9 million increase in business travel and related expenses. These increases, as well as the remainder of the increase, were primarily due to the execution of our growth strategy to acquire new clients, to increase the number of agent seats within our existing client base, and to establish brand awareness.

General and Administrative

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
General and administrative	$29,151	$25,072	$4,079	16%
% of Revenue	15%	16%		

The increase in general and administrative expenses for 2017 compared to 2016 was primarily due to a $2.8 million increase in cash-based personnel-related costs driven by increased headcount, a $2.0 million increase in settlement and associated legal costs incurred in 2017, and a $1.9 million increase in stock-based compensation costs due mainly to higher fair value of employee equity awards driven by our increased stock price and the modification of equity awards held by a former executive. See Note 7 to the consolidated financial statements for more information. These increases were offset in part by a $1.4 million decrease in facilities and allocated overhead costs and a $2.1 million reversal of interest and penalties on the accrued federal fees during 2017 following a favorable ruling from the FCC's Wireline Competition Bureau. See Note 10 to the consolidated financial statements for more information.

Other Income (Expense), Net

	Year Ended December 31,			
	2017	2016	$ Change	% Change
	(in thousands, except percentages)			
Extinguishment of debt	$—	$(1,026)	$ 1,026	100 %
Interest expense	(3,471)	(4,226)	755	18 %
Interest income and other	490	(12)	502	4,183 %
Total other income (expense), net	$(2,981)	$(5,264)	$ 2,283	43 %
% of Revenue	(1)%	(3)%		

The favorable change in other income (expense), net for 2017 compared to 2016 was primarily due to a $1.0 million loss on the refinancing of prior debts recorded in the third quarter of 2016. See Note 6 to the consolidated financial statements for more information. The favorable change was also driven by lower interest expense resulting from lower interest rates under the 2016 Loan and Security Agreement versus the prior loan and security agreements, partially offset by the $0.4 million non-cash adjustment on investment for 2017.

Liquidity and Capital Resources

To date, we have financed our operations, primarily through sales of our solution, lease facilities and net proceeds from our equity and debt financings including the issuance of our 0.125% convertible senior notes in May 2018. As of December 31, 2018, we had $286.0 million in working capital, which included $81.9 million in cash and cash equivalents and $209.9 million in marketable investments.

In May 2018, we issued $258.8 million aggregate principal amount of our 0.125% convertible senior notes, or Notes, due May 1, 2023 in a private offering. The Notes are our senior unsecured obligations and bear interest at a fixed rate of 0.125% per annum, payable semiannually in arrears on May 1 and November 1 of each year, beginning on

November 1, 2018. The total net proceeds from the offering, after deducting the initial purchasers' discounts and

Table of Contents

estimated debt issuance costs, were approximately $250.7 million. For additional information regarding the Notes, see Note 6 to the consolidated financial statements for additional information.

In August 2016, we entered into a loan agreement ("2016 Loan and Security Agreement") with two lenders for a revolving credit facility of up to $50.0 million. The revolving credit facility bore a variable annual interest rate of the prime rate plus 0.50%, subject to a 0.25% increase if our adjusted EBITDA was negative at the end of any fiscal quarter. In May 2018, we paid off the then outstanding principal balance of the revolving line of credit, and in July 2018, we terminated the 2016 Loan and Security Agreement.

We believe our existing cash and cash equivalents will be sufficient to meet our working capital and capital expenditure needs for at least the next 12 months. Our future capital requirements will depend on many factors including our growth rate, continuing market acceptance of our solution, client retention, our ability to gain new clients, the timing and extent of spending to support research and development efforts, the outcome of any pending or future litigation or other claims by third parties or governmental entities, the expansion of sales and marketing activities and the introduction of new and enhanced offerings. We may also acquire or invest in complementary businesses, technologies and intellectual property rights, which may increase our future capital requirements, both to pay acquisition costs and to support our combined operations. We may raise additional equity or debt financing at any time. We may not be able to raise additional equity or debt financing on terms acceptable to us or at all. If we are unable to raise additional capital when desired or required, our business, operating results, and financial condition would be harmed. In addition, if our operating performance during the next twelve months is below our expectations, our liquidity and ability to operate our business could be harmed.

If we raise additional funds by issuing equity or equity-linked securities, the ownership of our existing stockholders will be diluted. If we raise additional funds through the incurrence of additional indebtedness, we will be subject to increased debt service obligations and could also be subject to restrictive covenants and other operating restrictions that could harm our ability to conduct our business.

Cash Flows

The following table summarizes our cash flows for the periods presented (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Net cash provided by operating activities	$38,622	$11,106	$6,838
Net cash (used in) investing activities	(216,749)	(2,650)	(2,397)
Net cash provided by (used in) financing activities	191,092	2,369	(4,803)
Net increase (decrease) in cash and cash equivalents	$12,965	$10,825	$(362)

Cash Flows from Operating Activities

Cash provided by or used in operating activities is primarily influenced by our personnel-related expenditures, data center and telecommunications carrier costs, office and facility related costs, USF contributions and other regulatory costs and the amount and timing of client payments. If we continue to improve our financial results, we expect net cash provided by operating activities to increase. Our largest source of operating cash inflows is cash collections from our clients for subscription and related usage services. Payments from clients for these services are typically received monthly.

Net cash provided by operating activities was $38.6 million during the year ended December 31, 2018. Net cash provided by operating activities resulted from net loss of $0.2 million adjusted for non-cash items of $45.9 million, primarily consisting of $28.5 million of stock-based compensation, $10.3 million of depreciation and amortization and $7.9 million of amortization of discount and issuance costs on our convertible senior notes, offset by use of cash for operating assets and liabilities of $7.1 million, which was primarily driven by deferred contract acquisition costs due to deferral of incremental sales commissions in connection with the adoption of ASC 606.

During the year ended December 31, 2017, net cash provided by operating activities was $11.1 million compared to $6.8 million for the same period of 2016. The increase of $4.3 million was primarily due to an $8.0 million favorable impact from a decrease in net loss after adjusting for non-cash expenses, offset by a $3.7 million decrease in net cash resulting from changes in operating assets and liabilities. Cash outflows during 2017 included

58

Table of Contents

total payments of $1.8 million for settlement, legal and indemnification fees related to the Melcher litigation. See Note 10 to the consolidated financial statements for more information.

During the year ended December 31, 2017, cash outflows from changes in operating assets and liabilities was $1.3 million compared to cash inflows of $2.4 million for the same period in 2016. This unfavorable change was primarily due to a $1.8 million unfavorable change in accounts receivable driven by increased sales, a $1.1 million unfavorable change in prepaid expenses and other current assets mainly due to higher deferred cost of revenue, and a $1.2 million unfavorable change in accrued and other current liabilities primarily related to accrued cash-based personnel-related cost driven by headcount and the timing of payments for accrued liabilities.

Cash Flows from Investing Activities

Net cash used in investing activities in 2018 was $216.7 million compared to $2.7 million in 2017. Net cash used in investing activities in 2018 was comprised of $220.7 million related to purchases of marketable investments and $9.3 million in capital expenditures, offset by $11.3 million of cash proceeds from maturities of marketable investments and the $1.9 million cash proceeds from the sale of convertible notes held for investment.

Net cash used in investing activities was $2.7 million for the year ended December 31, 2017 compared to $2.4 million for the same period in 2016. The $0.3 million increase in cash used was primarily driven by the $1.5 million increase in purchase of property and equipment, offset primarily by our purchase of $1.2 million in convertible notes held for investment in 2016. Our most significant capital expenditures have been investments in our software and equipment for our data centers.

Cash Flows from Financing Activities

Net cash provided by financing activities in the year ended December 31, 2018 was $191.1 million, compared to $2.4 million in the year ended December 31, 2017. Net cash provided by financing activities of $191.1 million in the year ended December 31, 2018 related to cash proceeds of $250.7 million from the issuance of our convertible senior notes, cash proceeds of $7.8 million from exercises of stock options and warrants, and $5.7 million from the sale of common stock under our employee stock purchase plan, offset in part by repayments under our line of credit of $32.6 million, payments for capped call transactions of $31.4 million and payments of capital leases of $8.5 million.

Net cash provided by financing activities was $2.4 million for the year ended December 31, 2017 compared to net cash used of $4.8 million for the same period in 2016. This $7.2 million favorable change was primarily driven by a $1.7 million increase in cash received from stock option exercises in 2017, a $2.1 million increase in proceeds from the sale of common stock under our employee stock purchase plan in 2017, and our debt refinancing activities in 2016 including the $36.9 million repayments on notes payable and revolving line of credit as part of our cancellation of the 2013 Loan and Security Agreement and the 2014 Loan and Security Agreement, offset in part by the cash received from the $32.6 million drawdown under our New Revolving Credit Facility in 2016.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. On an ongoing basis, we evaluate our estimates and assumptions. Our actual results may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are described in Note 1 to the consolidated financial statements .

Revenue Recognition

Revenue is recognized when control of the promised services are transferred to customers, in an amount that reflects the consideration that we expect to receive in exchange for those services. We generate all of our revenue from contracts with customers. In contracts with multiple performance obligations, we identify each performance obligation and evaluate whether the performance obligations are distinct within the context of the contract at contract inception. Performance obligations that are not distinct at contract inception are combined. We allocate the transaction price to each distinct performance obligation proportionately based on the estimated standalone selling price for each performance obligation. We then look to how services are transferred to the customer in order to determine the timing of revenue recognition. Most services provided under our agreements result in the transfer of control over time.

Table of Contents

Our revenue consists of subscription services and related usage as well as professional services. We charge clients subscription fees, usually billed on a monthly basis, for access to our VCC solution. The subscription fees are primarily based on the number of agent seats, as well as the specific VCC functionalities and applications deployed by the client. Agent seats are defined as the maximum number of named agents allowed to concurrently access the VCC cloud platform. Clients typically have more named agents than agent seats. Multiple named agents may use an agent seat, though not simultaneously. Substantially all of our clients purchase both subscriptions and related telephony usage. A small percentage of our clients subscribe to our platform but purchase telephony usage directly from a wholesale telecommunications service provider. We do not sell telephony usage on a stand-alone basis to any client. The related usage fees are based on the volume of minutes used for inbound and outbound client interactions. We also offer bundled plans, generally for smaller deployments, whereby the client is charged a single monthly fixed fee per agent seat that includes both subscription and unlimited usage in the contiguous 48 states and, in some cases, Canada. Professional services revenue is derived primarily from VCC implementations, including application configuration, system integration, optimization, education and training services. Clients are not permitted to take possession of our software.

We offer monthly, annual and multiple-year contracts to our clients, generally with 30 days' notice required for changes in the number of agent seats and sometimes with a minimum number of agent seats required. Larger clients typically choose annual contracts, which generally include an implementation and ramp period of several months. Fixed subscription fees (including bundled plans) are generally billed monthly in advance, while related usage fees are billed in arrears. Support activities include technical assistance for our solution and upgrades and enhancements to our VCC cloud platform on a when-and-if-available basis, which are not billed separately.

Professional services are primarily billed on a fixed-fee basis and are performed by us directly or, alternatively, clients may also choose to perform these services themselves or engage their own third-party service providers. Revenue for professional services is recognized over time, as services are performed.

The estimation of variable consideration for each performance obligation requires us to make subjective judgments. In the early stages of our larger contracts, in order to allocate the overall transaction fee on a relative stand-alone selling price basis to our multiple performance obligations, we estimate variable consideration to be included in the transaction fee to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. This requires the estimate of unit quantities, especially during the initial ramp period of the contract, during which we bill under an 'actual usage' model for subscription-related services.

We recognize revenue on fixed fee professional services performance obligations based on the proportion of labor hours expended compared to the total hours expected to complete the related performance obligation.

The revenue recognition standards include guidance relating to any tax assessed by a governmental authority that is directly imposed on a revenue-producing transaction between a seller and a customer and may include, but is not limited to, sales, use, value added and excise taxes. We record USF contributions and other regulatory costs on a gross basis in our consolidated statements of operations and comprehensive loss and record surcharges and sales, use and excise taxes billed to our clients on a net basis. The cost of gross USF contributions payable to the USAC and suppliers is presented as a cost of revenue in the consolidated statements of operations and comprehensive loss.

Recent Accounting Pronouncements

Refer to Note 1 in Item 8 of this Form 10-K for information related to recent accounting pronouncements.

Off Balance Sheet Arrangements

As of December 31, 2018, we did not have any off balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K, such as the use of unconsolidated subsidiaries, structured finance, special purpose entities or variable interest entities.

Contractual Obligations

Commitments

Our principal contractual obligations consist of future payment obligations under our convertible senior notes, capital leases to finance data centers and other computer and networking equipment, operating leases for office

60

Table of Contents

space, research and development, and sales and marketing facilities, and agreements with third parties to provide co-location hosting, telecommunication usage and equipment maintenance services.

The following table summarizes our significant contractual obligations as of December 31, 2018 (in thousands).

	Payment Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Convertible senior notes [1]	$258,750	$ —	$ —	$258,750	$ —
Capital lease obligations [2]	12,208	7,220	4,988	—	—
Operating lease obligations [3]	6,328	3,041	3,287	—	—
Hosting services [4]	4,351	1,942	1,709	700	—
Telecommunication usage [5]	6,088	3,138	2,656	294	—
Equipment maintenance [6]	664	345	319	—	—
Total	$288,389	$ 15,686	$ 12,959	$259,744	$ —

(1) Represents the outstanding principal balance under our 0.125% convertible senior notes issued in May 2018. See Note 6 to the consolidated financial statements for more information.

(2) Represents financing of computer and networking equipment and software purchases for our co-location data centers.

(3) Represents our obligations to make payments under the lease agreements for our office facilities and office equipment leases.

(4) Represents guaranteed minimum payments for co-location facilities and services.

(5) Represents guaranteed minimum payments for telecommunication services.

(6) Represents our payment obligations under maintenance services contracts for certain data center equipment.

The contractual commitment amounts in the table above are associated with agreements that are enforceable and legally binding. Obligations under contracts that we can cancel without a significant penalty are not included in the table above.

Indemnification Agreements

In the ordinary course of business, we enter into agreements of varying scope and terms pursuant to which we agree to indemnify clients, vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of breach of such agreements, services to be provided by us or from intellectual property infringement claims made by third parties. In addition, we have entered into indemnification agreements with our directors, officers and certain employees that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. Other than as described below, no demands have been made upon us to provide indemnification under such agreements and there are no claims that we are aware of that could have a material effect on our consolidated balance sheet, consolidated statement of operations and comprehensive loss, or consolidated statements of cash flows.

On October 27, 2016, we received notice from Lance Fried, a former officer and director of Face It, Corp., or Face It, of his claim for indemnification by us (as successor in interest to Face It), and for advancement of all legal fees and expenses he incurs in connection with the defense of the lawsuit captioned Melcher, et al. v. Five9, Inc., et al., No. 16-cv-02440, in the U.S. District Court for the Southern District of California. In the lawsuit, plaintiff Carl Melcher, a purported former stockholder of Face It, and his related investment entity, Melcher Family Limited Partnership, allege that Face It repurchased the plaintiffs' stock in September 2013 before we acquired Face It, and that in connection with the repurchase, Fried made material misstatements or omissions to Melcher by failing to disclose that Face It allegedly was in concurrent discussions about a potential sale of its company to us. The lawsuit alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder, as well as various claims under state law and common law. On January 9, 2018, Mr. Fried initiated an arbitration against us in which he alleged that we breached advancement obligations to him. On June 11, 2018, the arbitrator ordered us to advance the fees Mr. Fried incurs (and has already incurred) in connection with the defense

61

Table of Contents

of the Melcher litigation. To date, we have advanced approximately $0.5 million in fees and expenses, included in general and administrative expenses, on behalf of Mr. Fried.

Regardless of the arbitrator's order, Mr. Fried is required to reimburse us for any amounts advanced to him if it is ultimately determined that Mr. Fried is not entitled to indemnification in connection with the Melcher litigation. In addition, we believe that we have indemnification rights against the former stockholders of Face It (including Mr. Fried) for all losses that are incurred by us in connection with the Melcher litigation, including without limitation, amounts incurred to indemnify or advance the legal fees and expenses of Mr. Fried pursuant to his indemnification claim against us. We have asserted claims in arbitration against both Mr. Fried and the representative of the former Face It stockholders to recoup these losses. These claims are stayed pending the resolution of the Melcher litigation.

Contingencies — Legal and Regulatory

We are subject to certain legal and regulatory proceedings, and from time to time may be involved in a variety of claims, lawsuits, investigations, and proceedings relating to contractual disputes, intellectual property rights, employment matters, regulatory compliance matters, and other litigation matters relating to various claims that arise in the normal course of business. We determine whether an estimated loss from a contingency should be accrued by assessing whether a loss is deemed probable and can be reasonably estimated. We assess our potential liability by analyzing specific litigation and regulatory matters using reasonably available information. We develop our views on estimated losses in consultation with inside and outside counsel, which involves a subjective analysis of potential results and outcomes, assuming various combinations of appropriate litigation and settlement strategies. Legal fees are expensed in the period in which they are incurred. See Note 10 to the consolidated financial statements for more details.

ITEM 7A. Quantitative and Qualitative Disclosure About Market Risk

We are exposed to market risk 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 a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes.

Interest Rate Sensitivity

We had cash and cash equivalents, and marketable securities totaling $291.8 million as of December 31, 2018. Cash equivalents and marketable securities were invested primarily in U.S. agency securities and government sponsored securities, U.S. treasury, municipal bonds, commercial paper, certificates of deposit and money market funds. Our investment policy is focused on the preservation of capital and supporting our liquidity needs. Under the policy, we invest in highly rated securities, while limiting the amount of credit exposure to any one issuer other than the U.S. government. We do not invest in financial instruments for trading or speculative purposes, nor do we use leveraged financial instruments. We utilize external investment managers who adhere to the guidelines of our investment policy. A hypothetical 100 basis point change in interest rates would not have a material impact on the value of our cash and cash equivalents or marketable investments.

In May 2018, we issued $258.8 million aggregate principal amount of convertible senior notes. The fair value of the convertible senior notes is subject to interest rate risk, market risk and other factors due to the conversion feature. The fair value of the convertible senior notes will generally increase as our common stock price increases and will generally decrease as our common stock price declines. The interest and market value changes affect the fair value of the convertible senior notes but do not impact our financial position, cash flows or results of operations due to the fixed nature of the debt obligation. Additionally, we carry the convertible senior notes at face value less unamortized discount on our consolidated balance sheets, and we present the fair value for required disclosure purposes only.

Foreign Currency Risk

The functional currency of our foreign subsidiaries is the U.S. dollar. Our sales are primarily denominated in U.S. dollars and, therefore, our revenue is not directly subject to foreign currency risk. However, we are indirectly exposed to foreign currency risk. A stronger U.S. dollar could make our solution more expensive in foreign countries and therefore reduce demand. A weaker U.S. dollar could have the opposite effect. Such economic exposure to currency fluctuations is difficult to measure or predict because our sales are influenced by many factors in addition to the impact of currency fluctuations.

62

Table of Contents

Our operating expenses are generally denominated in the currencies of the countries in which our operations are located, except for Russia where compensation of our employees is primarily denominated in the U.S. dollar. Our consolidated results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. To date, we have not entered into any hedging arrangements with respect to foreign currency risk or other derivative financial instruments. During the year ended December 31, 2018, the effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would have a maximum impact of $1.3 million on our operating results.

Table of Contents

ITEM 8. Financial Statements and Supplementary Data.

Report of Independent Registered Public Accounting Firm	65
Consolidated Balance Sheets	67
Consolidated Statements of Operations and Comprehensive Loss	68
Consolidated Statements of Stockholders' Equity	69
Consolidated Statements of Cash Flows	70
Notes to Consolidated Financial Statements	71

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Five9, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control over Financial Reporting
We have audited the accompanying consolidated balance sheets of Five9, Inc. and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
Change in Accounting Principle
As discussed in Note 2 to the consolidated financial statements, on January 1, 2018, the Company adopted new accounting guidance Accounting Standards Update No. 2014-09 Revenue from Contracts with Customers (Topic 606). Our opinion is not modified with respect to this matter.
Basis for Opinions
The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.
Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Table of Contents

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

KPMG LLP

We have served as the Company's auditor since 2012.

San Francisco, California

February 25, 2019

Table of Contents

FIVE9, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share data)

	December 31,	
	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	$81,912	$68,947
Marketable investments	209,907	—
Accounts receivable, net	24,797	19,048
Prepaid expenses and other current assets	8,014	4,840
Deferred contract acquisition costs	9,372	—
Total current assets	334,002	92,835
Property and equipment, net	25,885	19,888
Intangible assets, net	631	1,073
Goodwill	11,798	11,798
Other assets	836	2,602
Deferred contract acquisition costs — less current portion	21,514	—
Total assets	$394,666	$128,196
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$7,010	$4,292
Accrued and other current liabilities	13,771	11,787
Accrued federal fees	1,434	1,151
Sales tax liability	1,741	1,326
Notes payable	—	336
Capital leases	6,647	6,651
Deferred revenue	17,391	13,975
Total current liabilities	47,994	39,518
Convertible senior notes	196,763	—
Revolving line of credit	—	32,594
Sales tax liability — less current portion	841	1,044
Capital leases — less current portion	4,509	7,161
Other long-term liabilities	1,811	1,041
Total liabilities	251,918	81,358
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000 shares authorized, no shares issued and outstanding as of December 31, 2018 and 2017	—	—
Common stock, $0.001 par value; 450,000 shares authorized, 59,210 shares and 56,632 shares issued and outstanding as of December 31, 2018 and 2017, respectively	59	57
Additional paid-in capital	294,279	222,202
Accumulated other comprehensive loss	(93)	—
Accumulated deficit	(151,497)	(175,421)
Total stockholders' equity	142,748	46,838
Total liabilities and stockholders' equity	$394,666	$128,196

See accompanying notes to consolidated financial statements.

67

Table of Contents

FIVE9, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Revenue	$257,664	$200,225	$162,090
Cost of revenue	104,034	83,104	66,934
Gross profit	153,630	117,121	95,156
Operating expenses:			
Research and development	34,172	27,120	23,878
Sales and marketing	72,001	66,570	52,748
General and administrative	40,448	29,151	25,072
Total operating expenses	146,621	122,841	101,698
Income (loss) from operations	7,009	(5,720)	(6,542)
Other income (expense), net:			
Extinguishment of debt	—	—	(1,026)
Interest expense	(10,245)	(3,471)	(4,226)
Interest income and other	3,315	490	(12)
Total other income (expense), net	(6,930)	(2,981)	(5,264)
Income (loss) before income taxes	79	(8,701)	(11,806)
Provision for income taxes	300	268	54
Net loss	$(221)	$(8,969)	$(11,860)
Net loss per share:			
Basic and diluted	$—	$(0.16)	$(0.23)
Shares used in computing net loss per share:			
Basic and diluted	58,076	54,946	52,342
Comprehensive Loss:			
Net Loss	$(221)	$(8,969)	$(11,860)
Other comprehensive loss	(93)	—	—
Comprehensive loss	$(314)	$(8,969)	$(11,860)

See accompanying notes to consolidated financial statements.

Table of Contents

FIVE9, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance as of December 31, 2015	51,165	$ 51	$180,649	$ —	$(154,420)	$ 26,280
Issuance of common stock upon exercise of stock options	982	1	4,285	—	—	4,286
Issuance of common stock upon vesting of restricted stock units	896	1	(1)	—	—	—
Issuance of common stock under ESPP	320	—	1,979	—	—	1,979
Stock-based compensation	—	—	9,643	—	—	9,643
Net loss	—	—	—		(11,860)	(11,860)
Balance as of December 31, 2016	53,363	53	196,555	—	(166,280)	30,328
Issuance of common stock upon exercise of stock options and warrants	2,033	2	6,033	—	—	6,035
Issuance of common stock upon vesting of restricted stock units	971	1	(1)	—	—	—
Issuance of common stock under ESPP	265	1	4,100	—	—	4,101
Stock-based compensation	—	—	15,343	—	—	15,343
Other [1]	—	—	172	—	(172)	—
Net loss	—	—	—	—	(8,969)	(8,969)
Balance as of December 31, 2017	56,632	57	222,202	—	(175,421)	46,838
Net reduction to opening accumulated deficit due to adoption of ASC 606[2]	—	—	—	—	24,145	24,145
Equity component of issuance of convertible senior notes	—	—	30,346	—	—	30,346
Issuance of common stock upon exercise of stock options and warrants	1,285	1	7,778	—	—	7,779
Issuance of common stock upon vesting of restricted stock units	1,047	1	(1)	—	—	—
Issuance of common stock under ESPP	246	—	5,730	—	—	5,730
Stock-based compensation	—	—	28,484	—	—	28,484
Shares held for tax withholdings	—	—	(260)	—	—	(260)
Other comprehensive loss	—	—	—	(93)	—	(93)
Net loss	—	—	—	—	(221)	(221)
Balance as of December 31, 2018	59,210	$ 59	$294,279	$ (93)	$(151,497)	$ 142,748

(1) Effective January 2017, the Company adopted Accounting Standards Update ("ASU") 2016-09 - Improvements to Employee Share-Based Payment Accounting. Accordingly, the Company accounted for forfeitures as they occurred rather than by estimating expected forfeitures. This amount represents the net effect of this change. See Note 1 for more information.

(2) Effective January 2018, the Company adopted ASU 2014-09 - Revenue from Contracts with Customers: Topic 606. Accordingly, the Company recorded a net reduction to opening accumulated deficit of $24.1 million as of January 1, 2018 due to the cumulative impact of adopting the new standard. See Note 2 for more information.

See accompanying notes to consolidated financial statements.

69

Table of Contents

FIVE9, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net loss	$(221)	$(8,969)	$(11,860)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	10,274	8,314	8,390
Amortization of premium on marketable investments	(670)	—	—
Provision for doubtful accounts	90	95	75
Stock-based compensation	28,484	15,343	9,643
Amortization of debt discount and issuance costs	129	80	241
Amortization of discount and issuance costs on convertible senior notes	7,881	—	—
Loss on extinguishment of debt	—	—	1,026
Reversal of interest and penalties on accrued federal fees	—	(2,133)	—
Gain on sale of convertible note held for investment	(312)	—	—
Reversal of accrued federal fees	—	—	(3,114)
Non-cash adjustment on investment	(40)	(366)	—
Accretion of interest	44	21	20
Others	27	(48)	(10)
Changes in operating assets and liabilities:			
Accounts receivable	(5,829)	(5,163)	(3,389)
Prepaid expenses and other current assets	(2,806)	(1,912)	(859)
Deferred contract acquisition costs	(7,748)	—	—
Other assets	193	(33)	203
Accounts payable	2,418	813	811
Accrued and other current liabilities	1,865	1,061	2,262
Accrued federal fees and sales tax liability	495	90	(182)
Deferred revenue	3,956	3,882	3,680
Other liabilities	392	31	(99)
Net cash provided by operating activities	38,622	11,106	6,838
Cash flows from investing activities:			
Purchases of marketable investments	(220,704)	—	—
Proceeds from maturities of marketable investments	11,293	—	—
Purchases of property and equipment	(9,261)	(2,650)	(1,131)
Purchases of convertible notes held for investment	—	—	(1,206)
Proceeds from sale of convertible note held for investment	1,923	—	—
Increase in restricted cash	—	—	(60)
Net cash (used in) investing activities	(216,749)	(2,650)	(2,397)
Cash flows from financing activities:			
Proceeds from issuance of convertible senior notes, net of issuance costs paid $8,039	250,711	—	—
Payments for capped call transactions	(31,412)	—	—
Proceeds from exercise of common stock options	7,779	6,035	4,286
Proceeds from sale of common stock under ESPP	5,730	4,101	1,979
Payments of employee taxes related to vested common stock	(260)	—	—
Proceeds from revolving line of credit	—	—	32,594
Repayments on revolving line of credit	(32,594)	—	(12,500)
Repayments of notes payable	(318)	(699)	(24,351)

Payments of capital leases	(8,544)	(7,068)	(6,237)
Payment of prepayment penalty and related fees	—	—	(368)
Payments for debt issuance costs	—	—	(206)
Net cash provided by (used in) financing activities	191,092	2,369	(4,803)
Net increase (decrease) in cash and cash equivalents	12,965	10,825	(362)
Cash and cash equivalents:			
Beginning of year	68,947	58,122	58,484
End of year	$81,912	$68,947	$58,122
Supplemental disclosures of cash flow data:			
Cash paid for interest	$2,288	$3,311	$4,234
Cash paid for income taxes	159	121	115
Non-cash investing and financing activities:			
Equipment obtained under capital lease	$5,142	$10,261	$8,202
Equipment purchased and unpaid at period-end	1,583	145	163
Capitalization of leasehold improvement through non-cash lease incentive	—	142	—

See accompanying notes to the consolidated financial statements.

Table of Contents

FIVE9, INC.
Notes to Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Five9, Inc. and its wholly-owned subsidiaries (the "Company") is a provider of cloud software for contact centers. The Company was incorporated in Delaware in 2001 and is headquartered in San Ramon, California. The Company has offices in Europe and Asia, which primarily provide research, development, sales, marketing, and client support services.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") and applicable rules and regulations of the Securities and Exchange Commission ("SEC") regarding annual financial reporting. All intercompany transactions and balances have been eliminated in consolidation.

Certain prior period amounts included in the consolidated financial statements have been reclassified to conform to the current period presentation.

Use of Estimates

The preparation of consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. The significant estimates made by management affect revenue and related reserves. Management periodically evaluates such estimates and they are adjusted prospectively based upon such periodic evaluation. Actual results could differ from those estimates.

Foreign Currency

The functional currency of the Company's foreign subsidiaries is the U.S. dollar. For these subsidiaries, the monetary assets and liabilities are re-measured into U.S. dollars at the current exchange rate as of the balance sheet date, and all non-monetary assets and liabilities are re-measured into U.S. dollars at historical exchange rates. Revenues are primarily denominated in U.S dollars. Expenses are converted using average rates in effect on a monthly basis. Exchange gains and losses resulting from foreign currency transactions were not significant in any period and are reported in "Other income (expense), net" in the consolidated statements of operations and comprehensive loss.

Cash and Cash Equivalents

The Company's cash and cash equivalents consist of highly liquid investments with maturities of three months or less at the time of purchase. The Company's cash equivalents consist of investments in money market funds, U.S. treasury securities, U.S. agency securities and commercial paper.

Marketable Investments

The Company's marketable investments consist of U.S agency securities and government sponsored securities, U.S. treasury securities, certificates of deposit, municipal bonds, corporate bonds and commercial paper. The Company determines the appropriate classification of its investments in marketable investments at the time of purchase and re-evaluates such designation at each balance sheet date. The Company's marketable investments have been classified and accounted for as available-for-sale. Marketable investments are carried at fair value.

Concentration Risks

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist primarily of cash and cash equivalents, marketable investments and accounts receivable. A significant portion of the Company's cash and cash equivalents is held at three large reputable financial institutions. Total cash

Table of Contents

and cash equivalents in excess of insured limits were $81.0 million and $68.3 million as of December 31, 2018 and 2017, respectively. The Company has not experienced any losses in such accounts.

As of December 31, 2018 and 2017, no single client represented more than 10% of accounts receivable. For the years ended December 31, 2018, 2017 and 2016, no single client represented more than 10% of revenue.

Allowance for Doubtful Accounts

The Company records a provision for doubtful accounts based on historical experience and a detailed assessment of the collectability of its accounts receivable. In estimating the allowance for doubtful accounts, management considers, among other factors, the aging of the accounts receivable, historical write-offs and the creditworthiness of each client. If circumstances change, such as higher-than-expected defaults or an unexpected material adverse change in a major client's ability to meet its financial obligations, the Company's estimate of the recoverability of the amounts due could be reduced by a material amount.

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

	Year Ended December 31,		
	2018	2017	2016
Balance, beginning of period	$33	$12	$15
Add: bad debt expense	90	95	75
Less: write-offs, net of recoveries	(111)	(74)	(78)
Balance, end of period	$12	$33	$12

Property and Equipment, Net

Property and equipment is stated at cost less accumulated depreciation and amortization, and is depreciated using the straight-line method over the estimated useful lives of the assets as follows:

Asset Category	Estimated Useful Lives
Computer and network equipment	3 to 5 years
Computer software	3 years
Development costs	1 to 5 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of useful life or lease term

Maintenance and repairs are charged to expense as incurred, and improvements and betterments are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation and amortization are removed from the consolidated balance sheet and any resulting gain or loss is reflected in the consolidated statements of operations and comprehensive loss in the period realized.

The Company evaluates the recoverability of property and equipment for possible impairment whenever events or circumstances indicate that the carrying amount of such assets or asset groups may not be recoverable. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets or asset groups are expected to generate. If such evaluation indicates that the carrying amount of the assets or asset groups is not recoverable, the carrying amount of such assets or asset groups is reduced to fair value. No impairment losses have been recognized in any of the periods presented.

Goodwill and Intangible Assets

The Company records goodwill when the consideration paid in a business combination exceeds the fair value of the net tangible assets and the identified intangible assets acquired. Goodwill is not amortized, but instead is required to be tested for impairment annually and whenever events or changes in circumstances indicate that the carrying value of goodwill may exceed its fair value.

The Company performs testing for impairment of goodwill in its fourth quarter, or as events occur or circumstances change that would more likely than not reduce the fair value of the Company's single reporting unit below its carrying amount. A qualitative assessment is first made to determine whether it is necessary to perform the

Table of Contents

two-step quantitative goodwill impairment test. This initial qualitative assessment includes, among other things, consideration of: (i) market capitalization of the Company, (ii) past, current and projected future earnings and equity; (iii) recent trends and market conditions; and (iv) valuation metrics involving similar companies that are publicly-traded and acquisitions of similar companies, if available. If this initial qualitative assessment indicates that it is more likely than not that impairment exists, a second analysis will be performed, involving a comparison between the estimated fair values of the Company's reporting unit with its respective carrying amount including goodwill. If the carrying value exceeds estimated fair value, there is an indication of potential impairment, and a third analysis is performed to measure the amount of impairment. The third analysis involves calculating an implied fair value of goodwill by measuring the excess of the estimated fair value of the reporting unit over the aggregate estimated fair values of the individual assets less liabilities. If the carrying value of goodwill exceeds the implied fair value of goodwill, an impairment charge is recorded for the excess.

Intangible assets, consisting of acquired developed technology, domain names and customer relationships, are carried at cost less accumulated amortization. All intangible assets have been determined to have definite lives and are amortized on a straight-line basis over their estimated remaining economic lives, ranging from five to seven years. Amortization expense related to developed technology is included in cost of revenue. Amortization expense related to customer relationships is included in sales and marketing expense. Amortization expense related to domain names is included in general and administrative expense. Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable.

Revenue Recognition

Revenue is recognized when control of the promised services are transferred to customers in an amount that reflects the consideration that the Company expects to receive in exchange for those services. The Company generates all of its revenue from contracts with customers. In contracts with multiple performance obligations, it identifies each performance obligation and evaluates whether the performance obligations are distinct within the context of the contract at contract inception. Performance obligations that are not distinct at contract inception are combined. The Company allocates the transaction price to each distinct performance obligation proportionately based on the estimated standalone selling price for each performance obligation. The Company then looks to how services are transferred to the customer in order to determine the timing of revenue recognition. Most services provided under the Company's agreements result in the transfer of control over time.

The Company's revenue consists of subscription services and related usage as well as professional services. The Company charges clients subscription fees, usually billed on a monthly basis, for access to the Company's VCC solution. The subscription fees are primarily based on the number of agent seats, as well as the specific VCC functionalities and applications deployed by the client. Agent seats are defined as the maximum number of named agents allowed to concurrently access the VCC cloud platform. Clients typically have more named agents than agent seats. Multiple named agents may use an agent seat, though not simultaneously. Substantially all of the Company's clients purchase both subscriptions and related telephony usage. A small percentage of the Company's clients subscribe to its platform but purchase telephony usage directly from a wholesale telecommunications service provider. The Company does not sell telephony usage on a stand-alone basis to any client. The related usage fees are based on the volume of minutes used for inbound and outbound client interactions. The Company also offers bundled plans, generally for smaller deployments, whereby the client is charged a single monthly fixed fee per agent seat that includes both subscription and unlimited usage in the contiguous 48 states and, in some cases, Canada. Professional services revenue is derived primarily from VCC implementations, including application configuration, system integration, optimization, education and training services. Clients are not permitted to take possession of the Company's software.

The Company offers monthly, annual and multiple-year contracts to its clients, generally with 30 days' notice required for changes in the number of agent seats and sometimes with a minimum number of agent seats required. Larger clients typically choose annual contracts, which generally include an implementation and ramp period of several months. Fixed subscription fees (including bundled plans) are generally billed monthly in advance, while related usage fees are billed in arrears. Support activities include technical assistance for the Company's solution and upgrades and enhancements to the VCC cloud platform on a when-and-if-available basis, which are not billed separately.

The Company generally requires advance deposits from its clients based on estimated usage when such usage is not billed as part of a bundled plan. Any unused portion of the deposit is refundable to the client upon termination of the arrangement, provided all amounts due have been paid. All fees, except usage deposits, are non-refundable.

Table of Contents

Professional services are primarily billed on a fixed-fee basis and are performed by the Company directly or, alternatively, clients may also choose to perform these services themselves or engage their own third-party service providers. Revenue for professional services is recognized over time, as services are performed.

The estimation of variable consideration for each performance obligation requires the Company to make subjective judgments resulting in estimated variable consideration that is included in the transaction fee. This is done to the extent that it is probable, in the Company's judgment, that a significant reversal in the amount of cumulative revenue recognized under the contract will not occur. The Company estimates the variable consideration in order to allocate the overall transaction fee on a relative stand-alone selling price basis to its multiple performance obligations. This requires the estimate of unit quantities, especially during the initial ramp period of the contract, during which the Company bills under an 'actual usage' model for subscription-related services.

The Company recognizes revenue on fixed fee professional services performance obligations based on the proportion of labor hours expended compared to the total hours expected to complete the related performance obligation. The determination of the total labor hours expected to complete the performance obligations involves judgment, which influences the initial stand-alone selling price estimate as well as the timing of professional services revenue recognition, although this is typically resolved in a short time frame.

When a contract with a customer is signed, the Company assesses whether collection of the fees under the arrangement is probable. The Company assesses collection based on a number of factors, including past transaction history and the creditworthiness of the client. The Company maintains a revenue reserve for potential credits to be issued in accordance with service level agreements or for other revenue adjustments.

Deferred Revenue

Deferred revenue consists of billings or payments received from clients for subscription service, usage and professional services in advance of revenue recognition and is recognized in accordance with the Company's revenue recognition policy discussed above. The Company generally invoices its clients monthly in advance for subscription services. Accordingly, the deferred revenue balance does not represent the total contract value of sales arrangements.

Cost of Revenue

Cost of revenue consists primarily of personnel costs, including stock-based compensation, fees that the Company pays to telecommunications providers for usage, Universal Service Fund and related funds, or USF, contributions and other regulatory costs, depreciation and related expenses of the servers and equipment, costs to build out and maintain co-location data centers, and allocated office and facility costs and amortization of acquired technology. Personnel costs include those associated with support of the Company's solution, clients and data center operations, as well as with providing professional services. Data center costs include costs to build out and setup, as well as co-location fees for the right to place the Company's servers in data centers owned by third parties.

Research and Development

Research and development expenses consist primarily of salary and related expenses, including stock-based compensation, for personnel related to the development of improvements and expanded features for our services, as well as quality assurance, testing, product management and allocated overhead. Research and development costs are expensed as incurred except for internal use software development costs that qualify for capitalization. The Company reviews development costs incurred for internal-use software in the application development stage and assesses costs for capitalization.

Advertising Costs

The Company primarily advertises its services through the web and in conjunction with partners. Advertising costs are expensed as incurred and were $12.2 million, $11.4 million and $10.7 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Commissions

Commissions consist of variable compensation earned by sales personnel and referral fees the Company pays to third parties. Under Accounting Standard Codification 605 - Revenue Recognition ("ASC 605"), all sales

Table of Contents

commissions associated with the acquisition or renewal of a client contract were recognized as sales and marketing expense as incurred. On January 1, 2018, the Company adopted Accounting Standard Codification 606 - Revenue from Contracts with Customers ("ASC 606"). In connection with the adoption of ASC 606, the Company also adopted ASC 340-40, Other Assets and Deferred Costs - Contracts with Customers ("ASC 340-40"), which requires the deferral of incremental costs of obtaining a contract with a customer. Collectively, the Company refers to ASC 606 and ASC 340-40 as the "new standard." Under the new standard, the Company defers all incremental commission costs to obtain the contract, and amortizes these costs over a period of benefit determined to be five years. See Note 2 for more information. Commission expense was $10.3 million, $14.0 million and $10.2 million for the years ended December 31, 2018, 2017 and 2016, respectively. The Company's sales commission expense under ASC 606 decreased by approximately $7.7 million in 2018 as compared to 2017.

Stock-Based Compensation

All stock-based compensation granted to employees and non-employee directors is measured as the grant date fair value of the award. The Company estimates the fair value of stock options and purchase rights under the Company's Equity Incentive Plans and the 2014 Employee Stock Purchase Plan, or ESPP, respectively, using the Black-Scholes option-pricing model. The fair value of restricted stock awards is equal to the fair value of the Company's common stock on the date of grant. Compensation expense is recognized net of forfeitures using the straight-line method over the service period, which is generally the vesting period.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. The Company records a valuation allowance to reduce its deferred tax assets to the amount of future tax benefit that is more likely than not to be realized. As of December 31, 2018 and 2017, the Company recorded a full valuation allowance against the net deferred tax assets because of its history of operating losses in the United States. The Company classifies interest and penalties on unrecognized tax benefits as income tax expense.

Comprehensive loss

Comprehensive loss consists of net loss, unrealized gains or losses on available-for-sale marketable investments and the effects of foreign currency translation adjustments. The Company presents comprehensive loss as part of the consolidated statements of operations. The changes in the accumulated balances of the components of other comprehensive loss were not material for the periods presented.

Net Income (Loss) Per Share

Basic net income (loss) per share is calculated by dividing net income (loss) by the weighted average number of shares of common stock outstanding during the period, and excludes any dilutive effects of employee stock-based awards and warrants. Diluted net income (loss) per share is computed giving effect to all potentially dilutive common shares, including common stock issuable upon exercise of stock options and warrants, vesting of restricted stock units and purchases under the ESPP. In periods of net loss, all potentially issuable shares of common stock are excluded from the diluted net loss per share computation because they are anti-dilutive. Therefore, basic and diluted net loss per share are the same for all years presented in the Company's consolidated statements of operations and comprehensive loss.

Indemnification

Certain of the Company's agreements with clients include provisions for indemnification against liabilities if the Company's solution infringes a third-party's intellectual property rights. To date, the Company has not incurred any material costs as a result of such indemnification provisions and the Company has not accrued any liabilities related to such obligations in the consolidated financial statements as of December 31, 2018 and 2017.

Table of Contents

Segment Information

The Company has determined that its Chief Executive Officer is its chief operating decision maker. The Company's Chief Executive Officer reviews financial information presented on a consolidated basis for purposes of assessing performance and making decisions on how to allocate resources. Accordingly, the Company has determined that it operates in a single reportable segment.

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (the "FASB") issued Accounting Standard Update ("ASU") No. 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. This ASU simplifies 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. The guidance was effective for the Company beginning in the first quarter of 2017. Accordingly, commencing in January 2017, the Company accounted for forfeitures as they occurred, rather than by estimating expected forfeitures. The net effect of this change was recognized as a $0.2 million reduction to accumulated deficit in the consolidated financial statements. Upon adoption of the new standard, all excess tax benefits and tax deficiencies (including tax benefits of dividends on share-based payment awards) are recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards are treated as discrete items in the reporting period in which they occur. The Company also recognizes excess tax benefits regardless of whether the benefit reduces taxes payable in the current period. The Company applied the modified retrospective adoption approach beginning January 1, 2017 and prior periods have not been adjusted. As a result, the Company established a net operating loss deferred tax asset of $5.3 million to account for prior period excess tax benefits through retained earnings, however an offsetting valuation allowance of $5.3 million was also established through retained earnings because it is not more likely than not that the deferred tax asset will be realized due to historical and expected future losses, such that there is no impact on the Company's consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers: Topic 606, amending revenue recognition guidance and requiring more detailed disclosures to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. ASU 2014-09 also includes Subtopic 340-40, Other Assets and Deferred Costs - Contracts with Customers, which requires the deferral of incremental costs of obtaining a contract with a customer. The Company adopted ASU 2014-09 and its related amendments (collectively "ASC 606") effective on January 1, 2018 using the modified retrospective method. See Note 2 for disclosure on the impact of adopting this standard.

Recent Accounting Pronouncements Not Yet Effective

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which requires measurement and recognition of expected credit losses for certain types of financial assets held. ASU 2016-13 is effective for the Company in its first quarter of 2020, and earlier adoption is permitted beginning in the first quarter of 2019. The Company is currently evaluating the impact of ASU 2016-13 on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) and issued subsequent amendments to the initial guidance in 2017 and 2018 within ASU 2017-13, ASU 2018-01, ASU 2018-10, ASU 2018-11 and ASU 2018-20 (collectively, "Topic 842"). Under the new guidance, a lessee will be required to recognize assets and liabilities for both finance, or capital, and operating leases with lease terms of more than 12 months. The ASU also will require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. Lessor accounting will remain largely unchanged from current GAAP. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach that includes a number of optional practical expedients that entities may elect to apply.

The Company will adopt Topic 842 using the modified retrospective method on January 1, 2019. The Company will elect the available practical expedients that it will apply and implement internal controls to enable the preparation of financial information upon adoption. The most significant impact will be the recognition of right-of use (ROU) assets and lease liabilities for operating leases, while the Company's accounting for capital leases remained substantially

unchanged. Adoption of Topic 842 will result in the recognition of ROU assets of $7.0

Table of Contents

million to $10.0 million, and offsetting lease liabilities for operating leases of $7.0 million to $10.0 million, as of January 1, 2019.

In August 2018, the FASB issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15"), which clarifies the accounting for implementation costs in cloud computing arrangements. ASU 2018-15 is effective for the Company in the first quarter of fiscal 2020. Early adoption is permitted. The Company is currently evaluating the impact this guidance will have on its consolidated financial statements.

There are several other new accounting pronouncements issued by the FASB, which the Company will adopt. However, the Company does not believe any of those accounting pronouncements will have a material impact on its consolidated financial position, operating results or statements of cash flows.

2. ASC 606 Adoption Impact and Revenue from Contracts with Customers

ASC 606 Adoption Impact

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method, applying to all contracts. The Company recognized the cumulative effect of applying the new revenue standard as an adjustment to the opening balance of accumulated deficit at the beginning of 2018. The comparative information has not been restated and continues to be reported under the accounting standards in effect for the period presented, or ASC 605. Adoption of the new standard resulted in changes to the Company's accounting policies for revenue recognition, commissions and deferred commissions as discussed below. The Company recorded a net reduction to opening accumulated deficit of $24.1 million as of January 1, 2018 due to the cumulative impact of adopting the new standard. The primary impact of adopting the new standard related to the deferral of $23.1 million in incremental commission costs of obtaining subscription contracts. Under ASC 605, the Company expensed all commission costs as incurred. Under the new standard, the Company defers all incremental commission costs to obtain the contract, and amortizes these costs over a period of benefit determined to be five years. The remaining $1.0 million impact of adopting the new standard related to revenue being recognized earlier than it would have been under ASC 605.

Practical Expedients and Exemptions

The Company applies a practical expedient that permits the Company to apply ASC 340-40 to a single portfolio of contracts, as they are similar in their characteristics, and the financial statement effects of applying ASC 340-40 to that portfolio would not differ materially from applying it to the individual contracts within that portfolio. Additionally, the Company has elected the optional exemption which allows for the exclusion of the amounts for remaining performance obligations that are part of contracts with an original expected duration of one year or less.

Table of Contents

Impact on Consolidated Financial Statements

Select consolidated balance sheet line items, which reflect the adoption impact of the new standard, were as follows:

	December 31, 2018		
(in thousands)	As Reported	Balances without adoption of ASC 606	Effect of Change Higher (Lower)
Assets:			
Accounts receivable, net	$24,797	$24,694	$ 103
Prepaid expenses and other current assets	8,014	8,228	(214)
Deferred contract acquisition costs	30,886	—	30,886
Liabilities:			
Deferred revenue - current	17,391	19,116	(1,725)
Shareholders' Equity:			
Accumulated deficit	(151,497)	(183,997)	32,500

Select consolidated statement of operations line items, which reflect the adoption of the new standard, were as follows:

	Year ended December 31, 2018		
(in thousands, except per share amounts)	As Reported	Balances without adoption of ASC 606	Effect of Change Higher (Lower)
Revenue	$257,664	$256,548	$1,116
Cost of revenue	104,034	103,525	509
Gross profit	153,630	153,023	607
Sales and marketing	72,001	79,749	(7,748)
Income from operations	7,009	(1,346)	8,355
Net loss	(221)	(8,576)	8,355
Basic and diluted net loss per share	$—	$(0.15)	$0.15

Select consolidated cash flow line items, which reflect the adoption of the new standard, were as follows:

	Year ended December 31, 2018		
(in thousands)	As Reported	Balances without adoption of ASC 606	Effect of Change Higher (Lower)
Accounts receivable	$(5,829)	$(5,726)	$(103)
Prepaid expenses and other current assets	(2,806)	(3,020)	214
Deferred contract acquisition costs	(7,748)	—	(7,748)
Deferred revenue	3,956	5,681	(1,725)
Net cash provided by operating activities	38,622	38,622	—

Table of Contents

Contract Balances

The following table provides information about accounts receivable, net, deferred contract acquisition costs, contract assets and contract liabilities from contracts with customers (in thousands):

	December 31, 2018	January 1, 2018
Accounts receivable, net	$ 24,797	$19,151
Deferred contract acquisition costs:		
Current	$ 9,372	$7,059
Non-current	21,514	16,079
Total deferred contract acquisition costs	$ 30,886	$23,138
Contract assets and contract liabilities:		
Contract assets (included in prepaid expenses and other current assets)	$ 330	$736
Contract liabilities (deferred revenue)	17,391	13,568
Net contract assets (liabilities)	$ (17,061)	$(12,832)

The Company receives payments from customers based upon billing cycles. Invoice payment terms are usually 30 days or less. Accounts receivable are recorded when the right to consideration becomes unconditional.

The Company's deferred contract acquisition costs are recorded when incurred and are amortized over a customer benefit period of five years.

The Company's contract assets consist of unbilled amounts typically resulting from professional services revenue recognition when it exceeds the total amounts billed to the customer. The Company's contract liabilities consist of advance payments and billings in excess of revenue recognized.

In the year ended December 31, 2018, the Company recognized revenue of $10.2 million related to its contract liabilities at January 1, 2018.

Deferred Contract Acquisition Costs

In connection with the adoption of ASC 340-40, the Company capitalizes certain contract acquisition costs consisting primarily of commissions paid when contracts are signed and related incremental fringe benefits. As of January 1, 2018, the date of ASC 340-40 adoption, the Company had $23.1 million capitalized in deferred contract acquisition costs related to contracts where the benefit period had not yet expired. In the year ended December 31, 2018, amortization from amounts capitalized was $8.4 million and amounts expensed as incurred was $1.9 million. As of December 31, 2018, the Company had no impairment loss in relation to costs capitalized.

Remaining Performance Obligations

As of December 31, 2018, the aggregate amount of the total transaction price allocated in contracts with original duration of greater than one year to the remaining performance obligations was $96.8 million. The Company expects to recognize revenue on approximately three-fourths of the remaining performance obligation over the next 24 months, with the balance recognized thereafter. The Company has elected the optional exemption, which allows for the exclusion of the amounts for remaining performance obligations that are part of contracts with an original expected duration of one year or less. Such remaining performance obligations represent unsatisfied or partially unsatisfied performance obligations pursuant to ASC 606.

Table of Contents

3. Investments and Fair Value Measurements

Marketable Investments

The Company's marketable investments have been classified and accounted for as available-for-sale. The Company's marketable investments as of December 31, 2018 were as follows (in thousands):

	December 31, 2018			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Certificates of deposit	$4,259	$ —	$ —	$4,259
U.S. treasury	637	—	—	637
U.S. agency securities and government sponsored securities	154,314	1	(111)	154,204
Commercial paper	3,475	—	—	3,475
Municipal bonds	6,090	—	(4)	6,086
Corporate bonds	41,307	—	(61)	41,246
Total	$210,082	$ 1	$ (176)	$209,907

The following table presents the gross unrealized losses and the fair value for those marketable investments that were in an unrealized loss position for less than 12 months as of December 31, 2018 (in thousands):

	December 31, 2018	
	Gross Unrealized Losses	Fair Value
U.S. treasury	$—	$637
U.S. agency securities and government sponsored securities	(111)	153,212
Municipal bonds	(4)	6,086
Corporate bonds	(61)	41,246
Total	$(176)	$201,181

The contractual maturities of the Company's marketable investments as of December 31, 2018 were less than one year.

Fair Value Measurements

The Company carries cash equivalents and marketable investments at fair value. Fair value is based on the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 — Observable inputs, which include unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 — Observable inputs other than Level 1 inputs, such as quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are based on management's assumptions, including fair value measurements determined by using pricing models, discounted cash flow methodologies or similar techniques.

The Company determined the fair value of its Level 1 financial instruments, which are traded in active markets, using quoted market prices for identical instruments.

Table of Contents

Marketable investments classified within Level 2 of the fair value hierarchy are valued based on other observable inputs, including broker or dealer quotations or alternative pricing sources. When quoted prices in active markets for identical assets or liabilities are not available, the Company relies on non-binding quotes from its investment managers, which are based on proprietary valuation models of independent pricing services. These models generally use inputs such as observable market data, quoted market prices for similar instruments, historical pricing trends of a security as relative to its peers. To validate the fair value determination provided by its investment managers, the Company reviews the pricing movement in the context of overall market trends and trading information from its investment managers. The Company performs routine procedures such as comparing prices obtained from independent source to ensure that appropriate fair values are recorded.

The following table sets forth the Company's assets measured at fair value by level within the fair value hierarchy (in thousands):

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents				
Money market funds	$10,833	$—	$—	$10,833
U.S. Treasury	638	—	—	638
U.S. agency securities	—	50	—	50
Commercial paper	—	498	—	498
Total cash equivalents	$11,471	$548	$—	$12,019
Marketable investments				
Certificates of deposit	$—	$4,259	$—	$4,259
U.S. Treasury	637	—	—	637
U.S. agency securities and government sponsored securities	—	154,204	—	154,204
Commercial paper	—	3,475	—	3,475
Municipal bonds	—	6,086	—	6,086
Corporate bonds	—	41,246	—	41,246
Total marketable investments	$637	$209,270	$—	$209,907

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents:				
Money market funds	$20,092	$—	$—	$20,092
Other Assets				
Embedded conversion option held for investment	$—	$—	$984	$984

In February 2018, the Company exercised its embedded option held for investment, related to the Company's investment in a privately-held company, or the Investee company, to convert its convertible note into common shares of the Investee company prior to the Investee company's acquisition.

In March 2018, the Company received proceeds of $1.9 million from the conversion and sale of the convertible note of the Investee company with a carrying value of $1.6 million. Proceeds from the sale of the investment totaled $2.1 million. The Company expects to receive the remainder of the proceeds in the first half of 2019.

As of December 31, 2018, the estimated fair value of the Company's outstanding 0.125% convertible senior notes due 2023 was $316.1 million. The fair value was determined based on the quoted price of the convertible senior notes in an inactive market on the last trading day of the reporting period and has been classified as Level 2 in

81

Table of Contents

the fair value hierarchy. See Note 6 for further information on the Company's 0.125% convertible senior notes due 2023.

There were no assets or liabilities measured at fair value on a non-recurring basis as of December 31, 2018.

The Company's other financial instruments' fair value, including accounts receivable, accounts payable and other current liabilities, approximate its carrying value due to the relatively short maturity of those instruments. The carrying amounts of the Company's capital leases approximate their fair value, which is the present value of expected future cash payments based on assumptions about current interest rates and the creditworthiness of the Company.

4. Financial Statement Components

Cash and cash equivalents consisted of the following (in thousands):

	December 31,	
	2018	2017
Cash and cash equivalents:		
Cash	$69,893	$48,855
Money market funds	10,833	20,092
U.S. Treasury	638	—
U.S. agency securities	50	—
Commercial paper	498	—
Total cash and cash equivalents	$81,912	$68,947

Accounts receivable, net consisted of the following (in thousands):

	December 31,	
	2018	2017
Trade accounts receivable	$23,068	$17,481
Unbilled trade accounts receivable, net of advance client deposits	1,741	1,600
Allowance for doubtful accounts	(12)	(33)
Accounts receivable, net	$24,797	$19,048

Prepaid expenses and other current assets consisted of the following (in thousands):

	December 31,	
	2018	2017
Prepaid expenses	$5,005	$2,437
Other current assets	2,679	2,403
Contract assets	330	—
Prepaid expenses and other current assets	$8,014	$4,840

Table of Contents

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

	December 31,	
	2018	2017
Computer and network equipment	$54,452	$47,195
Computer software	10,064	6,974
Internal-use software development costs	500	500
Furniture and fixtures	1,491	1,282
Leasehold improvements	855	801
Property and equipment	67,362	56,752
Accumulated depreciation and amortization	(41,477)	(36,864)
Property and equipment, net	$25,885	$19,888

In accordance with the Company's property and equipment policy, the Company reviews the estimated useful lives of its fixed assets on an ongoing basis. The Company's review of its existing estimates indicated that the actual lives of certain data center assets were longer than the previously estimated useful lives used for depreciation purposes in the Company's financial statements. As a result, effective July 1, 2017, the Company changed the estimated useful lives of certain data center assets to better reflect the estimated periods during which these assets will remain in service. The estimated useful lives of these assets, which the Company previously depreciated for three years, was increased to a range of three to five years. For the year ended December 31, 2017, this change in accounting estimate decreased depreciation expense by $1.6 million and decreased both basic and diluted net loss per share by $0.03.

Depreciation and amortization expense associated with property and equipment was $9.8 million, $7.8 million, and $7.9 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Property and equipment capitalized under capital lease obligations consists primarily of computer and network equipment and was as follows (in thousands):

	December 31,	
	2018	2017
Gross	$47,383	$46,624
Less: accumulated depreciation and amortization	(33,547)	(30,438)
Total	$13,836	$16,186

Accrued and other current liabilities consisted of the following (in thousands):

	December 31,	
	2018	2017
Accrued expenses	$3,494	$3,130
Accrued compensation and benefits	10,277	8,657
Accrued and other current liabilities	$13,771	$11,787

5. Goodwill and Intangible Assets

Goodwill

Goodwill was recorded as a result of the Company's acquisition in October 2013 of Face It, Corp., which the Company also refers to as SoCoCare.

During the fourth quarter of 2018, the Company completed its annual goodwill impairment test. Based on its assessment of the qualitative factors, the Company's management concluded that the fair value of the Company's goodwill was more likely than not greater than its carrying amount as of December 31, 2018. As such, it was not necessary to perform the two-step quantitative goodwill impairment test. Subsequent to the 2018 annual impairment

Table of Contents

test, the Company believes there have been no significant events or circumstances negatively affecting the valuation of goodwill. As of December 31, 2018 and 2017, there was no impairment to the carrying value of the Company's goodwill.

Intangible Assets

Intangible assets were acquired in connection with the Company's acquisition of SoCoCare in October 2013. The components of intangible assets were as follows (in thousands):

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Developed technology	$2,460	$ (1,829)	$ 631	$2,460	$ (1,478)	$ 982
Customer relationships	520	(520)	—	520	(437)	83
Domain names	50	(50)	—	50	(42)	8
Total	$3,030	$ (2,399)	$ 631	$3,030	$ (1,957)	$ 1,073

Amortization expense related to intangible assets was $0.4 million, $0.5 million and $0.5 million for the years ended December 31, 2018, 2017 and 2016. As of December 31, 2018, the expected future amortization expense for intangible assets was as follows (in thousands):

Period	Expected Future Amortization Expense
2019	$ 351
2020	280
Total	$ 631

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable. The Company concluded that there was no impairment to the carrying value of its intangible assets as of December 31, 2018 and 2017.

6. Debt

0.125% Convertible Senior Notes and Capped Call

In May 2018, the Company issued $258.8 million aggregate principal amount of 0.125% convertible senior notes ("Notes") due May 1, 2023 in a private offering. The Notes are the Company's senior unsecured obligations and bear interest at a fixed rate of 0.125% per annum, payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2018. The total net proceeds from the offering, after deducting initial purchase discounts and estimated debt issuance costs, were approximately $250.7 million.

Each $1,000 principal amount of the Notes is initially convertible into 24.4978 shares of the Company's common stock (the "Conversion Option"), which is equivalent to an initial conversion price of approximately $40.82 per share of common stock, subject to adjustment upon the occurrence of specified events. The Notes are convertible, in multiples of $1,000 principal amount, at the option of the holders at any time prior to the close of business on the business day immediately preceding November 1, 2022, only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ended on September 30, 2018 (and only during such calendar quarter), if the last reported sale price of the Company's common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; (2) during the five business day period after any five consecutive trading day period (the "Measurement Period") in which the trading price (as defined in the indenture governing the Notes) per $1,000 principal amount of Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate in effect on each such trading day; (3) if the Company calls any or all of the Notes for redemption, at any time prior to the close of business on the second scheduled trading day

immediately preceding the redemption date; or (4) upon the occurrence of specified corporate events. On or after November 1, 2022 until the close of business on the second

Table of Contents

scheduled trading day immediately preceding the maturity date, holders may convert all or any portion of their Notes, in multiples of $1,000 principal amount, at the option of the holder regardless of the foregoing circumstances.
Upon conversion, the Company will pay or deliver, as the case may be, cash, shares of the Company's common stock or a combination of cash and shares of the Company's common stock, at the Company's election. If the Company undergoes a fundamental change (as defined in the indenture governing the Notes), subject to certain conditions, holders may require the Company to repurchase for cash all or any portion of their Notes, in principal amounts of $1,000 or a multiple thereof, at a fundamental change repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date. In addition, following certain corporate events that occur prior to the maturity date or if the Company issues a notice of redemption, it will, under certain circumstances, increase the conversion rate for holders who elect to convert their Notes in connection with such corporate event or during the relevant redemption period.
During the year ended December 31, 2018, the conditions allowing holders of the Notes to convert were not met. The Notes were therefore not convertible during the year ended December 31, 2018 and were classified as long-term debt.
The Company may not redeem the Notes prior to May 5, 2021. The Company may redeem for cash all or any portion of the Notes, at its option, on or after May 5, 2021 if the last reported sale price of its common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending not more than two trading days immediately preceding the date on which the Company provides notice of redemption at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date. No sinking fund is provided for the Notes.
The Notes are the Company's senior unsecured obligations and will rank senior in right of payment to any of the Company's indebtedness that is expressly subordinated in right of payment to the Notes; equal in right of payment to any of the Company's unsecured indebtedness that is not so subordinated; effectively junior in right of payment to any of the Company's secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) of the Company's subsidiaries.
In accounting for the transaction, the Notes were separated into liability and equity components. The carrying amount of the liability component was calculated by measuring the fair value of a similar debt instrument that does not have an associated conversion feature. The carrying amount of the equity component representing the conversion option was $63.8 million and was determined by deducting the fair value of the liability component from the par value of the Notes. The equity component was recorded in additional paid-in-capital and is not remeasured as long as it continues to meet the conditions for equity classification. The excess of the principal amount of the liability component over its carrying amount (the "Debt Discount") is being amortized to interest expense over the contractual term of the Notes at an effective interest rate of 6.39%.
In accounting for the debt issuance cost of $8.1 million related to the Notes, the Company allocated the total amount incurred to the liability and equity components of the Notes based on their relative values. Issuance costs attributable to the liability component were $6.1 million and are being amortized to interest expense using the effective interest method over the contractual term of the Notes. Issuance costs attributable to the equity component were netted with the equity component in additional paid-in-capital.
The net carrying amount of the liability component of the Notes was as follows (in thousands):

	December 31, 2018
Principal	$ 258,750
Unamortized debt discount	(56,564)
Unamortized issuance costs	(5,423)
Net carrying amount	$ 196,763

Table of Contents

The net carrying amount of the equity component of the Notes was as follows (in thousands):

	December 31, 2018
Debt discount for conversion option	$ 63,756
Issuance costs	(1,998)
Net carrying amount	$ 61,758

Interest expense related to the Notes was as follows (in thousands):

	Year Ended December 31, 2018
Contractual interest expense	$ 209
Amortization of debt discount	7,192
Amortization of issuance costs	689
Total interest expense	$ 8,090

In connection with the pricing of the Notes, the Company entered into privately negotiated capped call transactions (the "Capped Call Transactions") with certain financial institutions. The Capped Call Transactions are expected generally to reduce the potential dilution to the Company's common stock upon any conversion of the Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted Notes, as the case may be, with such reduction and/or offset subject to a cap based on the cap price. The initial cap price of the Capped Call Transactions is $62.80 per share, and is subject to certain adjustments under the terms of the Capped Call Transactions. The Capped Call Transactions cover, subject to anti-dilution adjustments, approximately 6.3 million shares of the Company's common stock. For accounting purposes, the Capped Call Transactions are separate transactions, and not part of the terms of the Notes. As these transactions meet certain accounting criteria, the Capped Call Transactions are recorded in stockholders' equity and are not accounted for as derivatives. The cost of $31.4 million incurred in connection with the Capped Call Transactions was recorded as a reduction to additional paid-in capital.

The net impact to the Company's stockholders' equity, included in additional paid-in capital, relating to the issuance of the Notes was as follows (in thousands):

	December 31, 2018
Conversion option	$ 63,756
Payments for capped call transactions	(31,412)
Issuance costs	(1,998)
Total	$ 30,346

2016 Loan and Security Agreement

In August 2016, the Company entered into a loan and security agreement, or the 2016 Loan and Security Agreement, with the lenders party thereto and City National Bank, as agent for such lenders. The 2016 Loan and Security Agreement provided for a revolving line of credit, of up to $50.0 million and was scheduled to mature on August 1, 2019. The revolving line of credit bore a variable interest rate equal to the prime rate plus 0.50%, subject to a 0.25% increase if the Company's adjusted EBITDA was negative at the end of any fiscal quarter. The Company was also required to pay a commitment fee equal to 0.25% of the unused portion of the revolving line of credit as well as an anniversary fee of $31,250 on each of August 1, 2017 and 2018. The obligations of the Company under the 2016 Loan and Security Agreement were guaranteed by its subsidiary, Five9 Acquisition LLC, and were secured by a first priority lien on substantially all of the assets of the Company and Five9 Acquisition LLC. In May 2018, the Company paid off the then outstanding principal balance of the revolving line of credit and, in July 2018, the Company terminated the 2016 Loan and Security Agreement.

The proceeds from the 2016 Loan and Security Agreement were used to extinguish indebtedness under all prior loan and security agreements and for working capital and other general corporate purposes. The Company recorded a $1.0

million loss on extinguishment of prior debts in the third quarter of 2016. The loss was comprised of

Table of Contents

$0.4 million in prepayment penalties, a $0.4 million write-off of unamortized debt discounts, and a $0.2 million write-off of unamortized debt issuance costs.

FCC Civil Penalty

In June 2015, the Company entered into a consent decree with the FCC Enforcement Bureau (See Note 10 for more information), in which the Company agreed to pay a civil penalty of $2.0 million to the U.S. Treasury in twelve equal quarterly installments starting in July 2015 without interest. As a result, the Company discounted the $2.0 million liability, which was accrued in the third quarter of 2014 for the then tentative civil penalty, to its then present value of $1.7 million at an annual interest rate of 12.75% to reflect the imputed interest and reclassified this discounted liability from ‘Accrued federal fees’ to ‘Notes payable.’ The $0.3 million discount was recorded as a reduction to general and administrative expense in the three months ended June 30, 2015 and was recognized as interest expense over the payment term of the civil penalty. As of December 31, 2018, the Company did not have any outstanding obligations under the civil penalty. As of December 31, 2017, the outstanding civil penalty payable was $0.3 million, of which the net carrying value was $0.3 million, and was included as ‘Notes payable’ in the accompanying consolidated balance sheets.

The Company’s outstanding debt as of the dates set forth below is summarized as follows (in thousands):

	December 31,	
	2018	2017
Note payable - FCC civil penalty, gross	$—	$333
Less: discount	—	(7)
Note payable, net carrying value	—	326
Convertible senior notes	196,763	—
Revolving line of credit	—	32,594
Interest accretion under 2016 line of credit	—	$10
Total debt, net carrying value	$196,763	$32,930
Less: current portion of debt *	$—	$336
Total debt, less current portion **	$196,763	$32,594

* Included in ‘Notes payable’ in the consolidated balance sheet as of December 31, 2017.

** Included in ‘Convertible senior notes’ and ‘Revolving line of credit’ as of December 31, 2018 and 2017, respectively, in the consolidated balance sheets.

Maturity of the Company’s outstanding debt as of December 31, 2018 was as follows (in thousands):

Period	Amount to Mature
2023	$258,750
Total	$258,750

7. Stockholders’ Equity

Capital Structure

Common Stock

The Company is authorized to issue 450,000,000 shares of common stock with a par value of $0.001 per share. As of December 31, 2018 and 2017, the Company had 59,210,496 and 56,631,647 shares of common stock issued and outstanding, respectively.

Holders of the Company’s common stock are entitled to dividends, if and when declared by the board of directors. In the event of liquidation, dissolution or winding up, subject to the rights of the holders of any then outstanding shares of preferred stock, holders of common stock will be entitled to receive the assets and funds of the Company that are legally available for distribution.

87

Table of Contents

Preferred Stock

The Company is authorized to designate and issue up to 5,000,000 shares of preferred stock with a par value of $0.001 per share in one or more series without stockholder approval and to fix the rights, preferences, privileges and restrictions thereof. As of December 31, 2018 and 2017, there were no shares of preferred stock issued and outstanding.

Warrants

As of December 31, 2017, the Company had outstanding warrants to purchase 13,013 shares of common stock with a weighted average exercise price of $5.76 per share. The warrants were exercised in the third quarter of 2018. As of December 31, 2018, the Company had no warrants outstanding.

Common Stock Reserved for Future Issuance

Shares of common stock reserved for future issuance related to outstanding equity awards and employee equity incentive plans as of December 31, 2018, were as follows (in thousands):

	Common Stock Reserved
Stock options outstanding	3,122
Restricted stock units outstanding	2,325
Shares available for future grant under 2014 Plan	8,443
Shares available for future issuance under ESPP	1,691
Total shares of common stock reserved	15,581

Equity Incentive Plans

Prior to the Company's initial public offering, or IPO, in April 2014, the Company granted stock options under its Amended and Restated 2004 Equity Incentive Plan, as amended, or the 2004 Plan.

Under the terms of the 2004 Plan, the Company had the ability to grant incentive and nonstatutory stock options. Incentive stock options could only be granted to Company employees. Nonstatutory stock options could be granted to Company employees, directors and consultants. Such options are exercisable at prices, as determined by the board of directors, generally equal to the fair value of the Company's common stock at the date of grant. Options granted to employees generally vest over a four-year period, with an initial vesting period of 12 months for 25% of the shares, and the remaining 75% of the shares vesting monthly on a ratable basis over the remaining 36 months. Options generally expire 10 years after the grant date and are generally exercisable upon vesting. Vested options generally expire 90 days after termination of the optionee's employment or relationship as a consultant or director, unless otherwise extended by the terms of the stock option agreement.

In March 2014, the Company's board of directors and stockholders approved the 2014 Equity Incentive Plan, or 2014 Plan, and 5,300,000 shares of common stock were authorized for issuance under the 2014 Plan. In addition, on the first day of each year beginning in 2015 and ending in 2024, the 2014 Plan provides for an annual automatic increase to the shares reserved for issuance in an amount equal to 5% of the total number of shares outstanding on December 31st of the preceding calendar year or a lesser number as determined by the Company's board of directors. Pursuant to the automatic annual increase, 2,960,524 additional shares were reserved under the 2014 Plan on January 1, 2019.

No further grants were made under the 2004 Plan once the 2014 Plan became effective on April 3, 2014. Upon the effectiveness of the 2014 Plan, all shares reserved for future issuance under the 2004 Plan became available for issuance under the 2014 Plan. Additionally, any forfeited or expired shares that would have otherwise returned to the 2004 Plan instead return to the 2014 Plan.

The 2014 Plan allows the Company to grant stock options, restricted stock units, or RSUs, restricted stock awards, performance stock awards, stock appreciation rights, performance cash awards, and other stock awards. To date, the Company has granted stock options and RSUs under the 2014 Plan. Stock options granted under the 2014 Plan are in general at a price equal to the fair market value of the common stock on the date of grant and vest over four years. The Company's stock options expire 10 years from the date of grant. Each RSU granted under the 2014

Table of Contents

Plan represents a right to receive one share of the Company's common stock when the RSU vests. RSUs generally vest over one to four years.

Stock Options

A summary of the Company's stock option activity during the year ended December 31, 2018 is as follows (in thousands, except years and per share data):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value [1]
Outstanding as of December 31, 2017	4,047	$ 8.00		
Options granted	477	35.00		
Options exercised	(1,274)	6.11		
Options forfeited or expired	(128)	17.69		
Outstanding as of December 31, 2018	3,122	$ 12.52	6.2	97,423
Vested and expected to vest as of December 31, 2018	3,122	12.52	6.2	97,423
Exercisable as of December 31, 2018	2,234	7.86	5.2	80,112

(1) The aggregate intrinsic value amounts are computed based on the difference between the exercise price of the stock options and the fair market value of the Company's common stock of $43.72 per share as of December 31, 2018 for all in-the-money stock options outstanding.

Following is additional information pertaining to the Company's stock option activity (in thousands, except per share data):

	Year Ended December 31,		
	2018	2017	2016
Weighted average grant date fair value per share of options granted	$16.33	$ 8.81	$4.50
Intrinsic value of options exercised [1]	34,785	33,820	5,865
Total fair value of options vested during the period	4,744	7,296	3,813
Cash received from options exercised	7,779	6,047	4,286

(1) Intrinsic value of options exercised is the difference between the fair market value of the Company's common stock at the time of exercise and the exercise price paid.

Restricted Stock Units

A summary of RSU activity during the year ended December 31, 2018 is as follows (in thousands, except years and per share data):

	Number of Shares	Weighted Average Grant Date Fair Value Per Share
Outstanding as of December 31, 2017	2,033	$ 12.81
RSUs granted	1,586	32.30
RSUs vested and released	(1,053)	13.16
RSUs forfeited	(241)	18.47

Outstanding as of December 31, 2018	2,325	$ 25.36

89

Table of Contents

Following is additional information pertaining to the Company's RSU activity (in thousands, except per share data):

	Year Ended December 31,		
	2018	2017	2016
Weighted average grant date fair value per share of RSUs granted	$32.30	$18.29	$9.71
Total fair value of RSUs vested during the period	41,245	21,161	10,706

Employee Stock Purchase Plan

In March 2014, the Company's board of directors and stockholders adopted the 2014 Employee Stock Purchase Plan, or ESPP, and the shares authorized for issuance thereunder. The ESPP became effective on April 3, 2014.

The ESPP permits eligible employees to purchase shares of the Company's common stock through payroll deductions with up to 15% of their pre-tax earnings subject to certain Internal Revenue Code limitations. The purchase price of the shares is 85% of the lower of the fair market value of the Company's common stock on the first day of a six month offering period, except for the initial offering period, or the relevant purchase date. In addition, no participant may purchase more than 1,500 shares of common stock in each purchase period.

The number of shares of common stock originally reserved for issuance under the ESPP was 880,000 shares, which increases automatically each year, beginning on January 1, 2015 and continuing through January 1, 2024, by the lesser of (i) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year; (ii) 1,000,000 shares of common stock (subject to adjustment to reflect any split or combination of our common stock); or (iii) such lesser number as determined by the Company's board of directors. Pursuant to the automatic annual increase, 592,104 additional shares were reserved under the ESPP on January 1, 2019.

During 2018, 246,079 shares were purchased by employees under the ESPP at a weighted average price of $23.29 per share.

Stock-Based Compensation

Stock-based compensation expenses for the years ended December 31, 2018, 2017 and 2016 were as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Cost of revenue	$3,333	$2,202	$1,375
Research and development [1]	5,303	3,042	2,059
Sales and marketing	6,307	4,364	2,363
General and administrative [2]	13,541	5,735	3,846
Total stock-based compensation	$28,484	$15,343	$9,643

(1) Includes an incremental stock-based compensation cost due to modification of certain stock-based awards of a former executive of the Company in the third quarter of 2018.

(2) Effective December 2017, the Company's former Chief Executive Officer and President resigned from his position and became the Executive Chairman of the Board. Due to this substantive change in status, certain of his stock option and RSU awards were modified which resulted in incremental stock based compensation expense of approximately $1.0 million in the fourth quarter of 2017.

As of December 31, 2018, unrecognized stock-based compensation expense by award type and their expected weighted-average recognition periods are summarized in the following table (in thousands, except years).

	Stock Option	RSU	ESPP
Unrecognized stock-based compensation expense	$11,369	$53,668	$1,048
Weighted-average amortization period	2.9 years	2.8 years	0.4 years

Table of Contents

The Company recognizes stock-based compensation expense that is calculated based upon awards that have vested, reduced for actual forfeitures. All stock-based compensation for equity awards granted to employees and non-employee directors is measured based on the grant date fair value of the award.

The Company values RSUs at the closing market price of its common stock on the date of grant. The Company estimates the fair value of each stock option and purchase right under the ESPP granted to employees on the date of grant using the Black-Scholes option-pricing model and using the assumptions disclosed in the table below. Expected volatility is based upon the historical volatility of a peer group of publicly traded companies. The expected term of options granted is estimated using the simplified method by taking the average of the vesting term and the contractual term of the option. The expected volatility assumption for purchase rights under the ESPP is based on the historical volatility of the Company's common stock. The risk-free rate for the expected term of the awards is based on U.S. Treasury zero-coupon issues at the time of grant. The Company has not paid, and does not anticipate paying, cash dividends on its shares of common stock. Accordingly, the expected dividend yield is zero.

The weighted average assumptions used to value stock options and purchase rights under the ESPP granted during the years ended December 31, 2018, 2017 and 2016 were as follows:

Stock Options	Year Ended December 31,		
	2018	2017	2016
Expected term (years)	6.0	5.9	5.7
Volatility	45%	49%	46%
Risk-free interest rate	2.8%	2.1%	1.4%
Dividend yield	—	—	—

ESPP	Granted In					
	November 2018	May 2018	November 2017	May 2017	November 2016	May 2016
Expected term (years)	0.5	0.5	0.5	0.5	0.5	0.5
Volatility	37%	36%	36%	43%	42%	58%
Risk-free interest rate	2.1%	1.4%	1.4%	1.0%	0.6%	0.4%
Dividend yield	—	—	—	—	—	—

8. Net Loss Per Share

Basic net loss per share is calculated by dividing net loss by the weighted average number of shares of common stock outstanding during the period, and excludes any dilutive effects of employee stock-based awards and warrants.

Diluted net income per share is computed giving effect to all potentially dilutive shares of common stock, including common stock issuable upon exercise of stock options and warrants and vesting of restricted stock. As the Company had net losses for the years ended December 31, 2018, 2017 and 2016, all potentially issuable shares of common stock were determined to be anti-dilutive.

The following table presents the calculation of basic and diluted net loss per share (in thousands, except per share data).

	Year Ended December 31,		
	2018	2017	2016
Net loss	$(221)	$(8,969)	$(11,860)
Weighted-average shares used in computing basic and diluted net loss per share	58,076	54,946	52,342
Basic and diluted net loss per share	$—	$(0.16)	$(0.23)

Table of Contents

The following securities were excluded from the calculation of diluted net loss per share because their effect would have been anti-dilutive (in thousands).

	December 31,		
	2018	2017	2016
Stock options	3,122	4,047	5,556
Restricted stock units	2,325	2,033	2,019
Common stock warrants	—	13	132
Total	5,447	6,093	7,707

The Company expects to settle the principal amount of its Notes outstanding as of December 31, 2018 in cash, and therefore, uses the treasury stock method for calculating any potential dilutive effect of the conversion spread. The conversion spread will have a dilutive impact when the average market price of the Company's common stock for a given period exceeds the initial conversion price of $40.82 per share for the Notes. The potential shares of common stock from Notes were excluded from the calculation of diluted net loss per share because their effect would have been anti-dilutive.

9. Income Taxes

The following table presents components of loss before income taxes for the periods presented (in thousands):

	Year Ended December 31,		
	2018	2017	2016
United States	$(638)	$(9,434)	$(12,222)
International	717	733	416
Income (loss) before income taxes	$79	$(8,701)	$(11,806)

Provision for income taxes for the periods presented consisted of (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current:			
U.S. federal	$—	$—	$—
U.S. state	28	42	16
Foreign	272	226	38
Total provision for income taxes	$300	$268	$54

Income tax expense differed from the amount computed by applying the U.S. federal statutory income tax rate of 21% to pre-tax income (loss) for the periods presented as a result of the following (in thousands):

	Year Ended December 31,		
	2018	2017	2016
U.S. federal tax at statutory rate	$17	$(2,958)	$(4,014)
U.S. state income taxes	2,539	(708)	490
Non-deductible expense (benefit)	14,485	(5,673)	931
Research and development credit	(339)	(402)	(262)
Stock-based compensation	(11,360)	(14,622)	983
Impact of 2017 Tax Act	—	25,952	—
Other	106	2	(104)
Change in valuation allowance	(5,148)	(1,323)	2,030
Total provision for income taxes	$300	$268	$54

Table of Contents

The tax effects of temporary differences that give rise to significant portions of the Company's deferred tax assets and liabilities as of December 31, 2018 and 2017 related to the following (in thousands):

	December 31,	
	2018	2017
Deferred tax assets:		
Net operating loss and credit carryforwards	$54,966	$47,991
Accrued liabilities	4,271	3,183
Allowance for doubtful accounts	400	416
Deferred revenue	832	140
Accrued compensation	1,081	900
Intangibles	4	7
Gross deferred tax assets	61,554	52,637
Valuation allowance	(47,127)	(52,275)
Net deferred tax assets	14,427	362
Deferred tax liabilities:		
Property and equipment	(370)	(98)
Amortized intangibles	(155)	(264)
Convertible senior notes	(13,902)	—
Gross deferred tax liabilities	(14,427)	(362)
Net deferred taxes	$—	$—

The Company has not provided for U.S. income taxes on undistributed earnings of its foreign subsidiaries because it intends to permanently re-invest those earnings outside the United States. The undistributed earnings of the Company's foreign subsidiaries were immaterial as of December 31, 2018 and 2017, and was $1.2 million as of December 31, 2016.

A valuation allowance is provided for deferred tax assets where the recoverability of the assets is uncertain. The determination to provide a valuation allowance is dependent upon the assessment of whether it is more likely than not that sufficient future taxable income will be generated to utilize the deferred tax assets. Based on the weight of the available evidence, which includes the Company's historical operating losses, lack of taxable income, and the accumulated deficit, for the year ended December 31, 2018, the Company has provided a valuation allowance against its U.S. net deferred tax assets. The net change in the valuation allowance for the years ended December 31, 2018 and 2017 was an increase of $5.1 million and a decrease of $1.3 million, respectively.

As of December 31, 2018, the Company had net operating loss carryforwards for federal and state income tax purposes of $216.8 million and $120.0 million, respectively, available to reduce future income subject to income taxes. If not utilized, the federal and state net operating loss carryforwards will begin to expire in 2024 and 2028, respectively. As of December 31, 2018, the Company also had research credit carryforwards for federal and California state tax purposes of $3.2 million and $2.8 million, available to reduce future income subject to income taxes. The federal research credit carryforwards will begin to expire in 2022 and the California state research credits can be carried forward indefinitely. The Internal Revenue Code ("IRC") of 1986, as amended, imposes restrictions on the utilization of net operating losses in the event of an "ownership change" of a corporation. Accordingly, a company's ability to use net operating losses may be limited as prescribed under the IRC Section 382. Events that may cause limitations in the amount of the net operating losses that the Company may use in any one year include, but are not limited to, a cumulative ownership change of more than 50% over a three-year period. Utilization of federal and state net operating losses may be subject to substantial annual limitation due to the ownership change limitations provided by the IRC Section 382 and similar state provisions. In the event the Company has changes in ownership, net operating losses and research and development credit carryforwards, which are fully reserved by the deferred tax asset valuation allowance, could be limited and may expire unutilized.

Table of Contents

Unrecognized Tax Benefits

The table below shows the changes in the gross amount of unrecognized tax benefits for the periods presented (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Unrecognized benefit — beginning of period	$3,115	$2,805	$2,485
Gross increases — current year tax positions	7,608	310	324
Gross decreases — prior year tax positions	—	—	(4)
Unrecognized benefit — end of period	$10,723	$3,115	$2,805

As of December 31, 2018 and 2017, an immaterial amount of the total unrecognized tax benefits, if recognized, would have an impact on the Company's effective tax rate. The Company recognizes interest and penalties related to uncertain tax positions as income tax expense. The Company does not anticipate its total unrecognized tax benefits as of December 31, 2018 will significantly change due to settlement of examination or the expiration of statute of limitations during the next 12 months. The Company is currently unaware of any uncertain tax positions that could result in significant additional payments, accruals or other material deviation in this estimate over the next 12 months.

The Company is subject to taxation in the United States, various states and several foreign jurisdictions. Due to the Company's net carryover of unused operating losses, all years from 2001 forward remain subject to future examination by the U.S. federal and state tax authorities. The Company's foreign tax returns are open to audit under the statutes of limitations of the respective foreign countries in which the subsidiaries are located. The Company considers all undistributed earnings of its foreign subsidiaries indefinitely reinvested.

Tax Reform

In December 2017, new legislation (the "2017 Tax Act") was enacted that significantly revised the Internal Revenue Code of 1986, as amended. The 2017 Tax Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings, limitation of the deduction for newly generated net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated (the "Transition Tax"), future taxation of certain classes of offshore earnings regardless of whether they are repatriated, immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits beginning in 2018.

In December 2017, the SEC issued Staff Accounting Bulletin No. 118 which provided a measurement period of up to one year from the enactment of the 2017 Tax Act for companies to complete the accounting for the 2017 Tax Act and its related impacts. Upon completion of the accounting related to the income tax effect of the 2017 Tax Act, there were no material adjustments made to the previous estimates.

10. Commitments and Contingencies

Commitments

As of December 31, 2018, $258.8 million of the Notes were outstanding. The Notes are due May 1, 2023. See Note 6 for more information.

Leases

The Company has operating lease agreements for offices, research and development, and sales and marketing facilities that expire at various dates through 2021. The Company recognizes rent expense on a straight-line basis over the lease term and records the difference between cash rent payments and the recognized rent expense as a deferred rent liability. Rent expense was $2.8 million, $2.6 million and $2.1 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The Company enters into capital leases to finance data center and other computer and networking equipment.

Table of Contents

As of December 31, 2018, approximate remaining future minimum lease payments under non-cancelable leases were as follows (in thousands):

Year Ending December 31,	Capital Leases	Operating Leases
2019	$ 7,220	$ 3,041
2020	4,284	2,634
2021	704	653
2022	—	—
Total future minimum lease payment	$ 12,208	$ 6,328
Less — amount representing interest	(1,052)	
Present value of total capital lease obligation	$ 11,156	
Capital lease obligation — current portion	6,647	
Capital lease obligation — net of current portion	4,509	

Hosting, Telecommunication Usage and Maintenance Services

The Company has agreements with third parties to provide co-location hosting and telecommunication usage services. The agreements require payments per month for a fixed period of time in exchange for certain guarantees of network and telecommunication availability. The Company is also committed to make future payments under maintenance service contracts for certain data center equipment.

As of December 31, 2018, future minimum payments under these arrangements were as follows (in thousands):

Year Ending December 31,	Hosting Services	Telecommunication Usage Services	Equipment Maintenance Services
2019	$ 1,942	$ 3,138	$ 345
2020	1,209	1,781	243
2021	500	875	76
2022	700	294	—
Total future minimum payment	$ 4,351	$ 6,088	$ 664

Universal Services Fund Liability

The Company’s business is regulated by the FCC and the Company is required to make contributions to the USF. The Company is registered with the Universal Service Administrative Company, or USAC, which is charged by the FCC with administering the USF. The Company has been remitting the required contributions to USAC since its registration with the USAC in April 2013. However, the Company was also required to pay assessments for periods prior to its registration with the USAC. In this connection, the Company had recorded a disputed liability of $3.9 million related to its obligations for contributions for the period from 2008 to 2012. In January 2017, the FCC’s Wireline Competition Bureau ruled in the Company’s favor with respect to most of the disputed amount. In September 2017, USAC issued a credit to the Company reflecting the FCC’s ruling for the $3.1 million of the $3.9 million in disputed liability. In addition, USAC dropped its claim for interest and penalties related to the disputed liability of $3.1 million. The remaining $0.8 million in dispute involves USAC’s assessment of liability for the period of 2003 through 2007, which was prior to the five year window during which the Company was required to maintain financial records for USF contribution purposes. The Company filed a Request for Review (a form of appeal) of this disputed amount with the FCC’s Wireline Competition Bureau in 2013, which remains pending. If the Request for Review is not resolved in the Company’s favor, it is possible that the Company will be required to pay the assessments relating to 2003 through 2017. As of December 31, 2018, the Company had accrued $0.9 million in respect of the remaining disputed assessments, including interest and penalties, for the period of 2003 through 2007.

State and Local Taxes and Surcharges

In April 2012, the Company commenced collecting and remitting sales taxes on sales of subscription services in all the U.S. states in which it determined it was obligated to do so. During the first quarter of 2015, the Company conducted an updated sales tax review of the taxability of sales of its subscription services. As a result, the Company

Table of Contents

determined that it may be obligated to collect and remit sales taxes on such sales in four additional states. Based on its best estimate of the probable sales tax liability in those four states relating to its sales of subscription services during the period 2011 through 2014, during the three months ended March 31, 2015, the Company recorded a general and administrative expense of $0.6 million to accrue for such taxes.

During 2013, the Company analyzed its activities and determined it may be obligated to collect and remit various state and local taxes and surcharges on its usage-based fees. The Company had not remitted state and local taxes on usage-based fees in any of the periods prior to 2014 and therefore accrued a sales tax liability for this contingency. In January 2014, the Company commenced paying such taxes and surcharges to certain state authorities. In June 2014, the Company commenced collecting state and local taxes or surcharges on usage-based fees from its clients on a current basis and remitting such taxes to the applicable U.S. state taxing authorities.

During 2016, the Company analyzed its activities and determined that it may be obligated to collect and remit sales, excise and utility user taxes on certain charges related to toll free service in certain U.S. states and municipalities. The Company had neither collected nor remitted state or local taxes on such charges prior to December 2016. In the third quarter of 2016, the Company recorded an accrual for potential tax exposure related to toll free call charges for all periods open under the applicable statutes of limitations for assessment.

During 2018, the Company analyzed its activities and determined that it may be obligated to collect and remit sales tax on separately-stated service-based charges related to its subscription services. The Company had neither collected nor remitted sales tax on such charges prior to September 2018. In the third quarter of 2018, the Company began collecting applicable taxes on such charges.

During 2018, 2017 and 2016, the Company remitted $0.1 million, zero and $0.3 million, respectively, for contingent sales taxes on both usage-based fees and sales of subscription services. For the years ended December 31, 2018, 2017 and 2016, the Company recognized a gain of $0.3 million, a gain of $0.6 million, and a gain of $0.4 million, respectively, as an adjustment to general and administrative expense related to its estimated sales tax liability on both usage-based fees and sales of subscription services in the U.S. and Canada, which was not being collected from its clients.

As of December 31, 2018 and 2017, the Company had total accrued liabilities of $1.1 million and $1.5 million, respectively, for such contingent sales taxes and surcharges that were not being collected from its clients but may be imposed by various taxing authorities, of which $0.1 million and $0.4 million, respectively, were included in current “Sales tax liability” on the consolidated balance sheets, and the remaining were included in non-current “Sales tax liability” on the consolidated balance sheets. The Company’s estimate of the probable loss incurred under this contingency is based on its analysis of the source location of its usage-based fees and the regulations and rules in each tax jurisdiction.

Legal Matters

The Company is involved in various legal and regulatory matters arising in the normal course of business. In management’s opinion, resolution of these matters is not expected to have a material impact on the Company’s consolidated results of operations, cash flows, or its financial position. However, due to the uncertain nature of legal matters, an unfavorable resolution of a matter could materially affect the Company’s future consolidated results of operations, cash flows or financial position in a particular period. The Company expenses legal fees as incurred.

The Company is currently involved in the following lawsuits as a defendant.

Melcher Litigation

On September 28, 2016, a complaint was filed in the United States District Court for the Southern District of California against Five9, Inc., or Five9, as the successor in interest to Face It, Corp., or Face It, and Lance Fried, a former Five9 employee who was the former Chief Executive Officer of Face It. The action, captioned Melcher, et al. v. Five9, Inc., et al., No. 16-cv-02440, or the Melcher Litigation, was filed as a direct action by Carl Melcher, or Melcher, a purported former stockholder of Face It, and his related investment entity Melcher Family Limited Partnership, or MFLP.

In the complaint, the plaintiffs alleged that Face It repurchased the plaintiffs’ stock in September 2013 before Five9 acquired Face It, and that in connection with the repurchase, Fried made material misstatements or omissions to Melcher by failing to disclose that Face It allegedly was in concurrent discussions about a potential sale of its

company to Five9. The complaint alleged violations of Sections 10(b) and 20(a) of the Securities Exchange Act of

96

Table of Contents

1934 and Rule 10b-5 promulgated thereunder, as well as various claims under state law and common law. The complaint sought to set aside Face It's September 2013 stock repurchase from the plaintiffs, as well as an unspecified amount of damages and an award of attorney's fees and costs, in addition to other relief.

On November 8, 2016, the court entered an order staying the lawsuit and ordered the parties to proceed to arbitration of the dispute before the American Arbitration Association, or AAA. On November 16, 2016, Melcher and MFLP submitted a Demand for Arbitration to AAA against Five9, asserting claims identical to those alleged in the lawsuit. On March 31, 2017, Five9 reached a settlement with the plaintiffs that fully resolved the plaintiffs' claims against Five9 and provided for mutual releases between the plaintiffs and Five9 in exchange for a one-time payment by Five9 to the plaintiffs of $1.7 million. As a result of the settlement, the AAA arbitration was concluded, and on July 10, 2017 the plaintiffs filed an amended complaint in the Melcher Litigation solely against Fried, removing Five9 as a defendant.

For a discussion of the indemnification claims arising out of this matter, see "—Indemnification Agreements."

Indemnification Agreements

In the ordinary course of business, the Company enters into agreements of varying scope and terms pursuant to which it agrees to indemnify clients, vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of breach of such agreements, services to be provided by the Company or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with its directors, officers and certain employees that will require it, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. Other than as described below, there are no claims that it is aware of that could have a material effect on the consolidated balance sheet, consolidated statement of operations and comprehensive loss, or consolidated statements of cash flows.

On October 27, 2016, the Company received notice from Lance Fried, a former officer and director of Face It, Corp. of his claim for indemnification by the Company (as successor in interest to Face It), and for advancement of all legal fees and expenses he incurs in connection with the defense of the lawsuit captioned Melcher, et al. v. Five9, Inc., et al., No. 16-cv-02440, in the U.S. District Court for the Southern District of California. In the lawsuit, plaintiff Carl Melcher, a purported former stockholder of Face It, and his related investment entity, Melcher Family Limited Partnership, allege that Face It repurchased the plaintiffs' stock in September 2013 before the Company acquired Face It, and that in connection with the repurchase, Fried made material misstatements or omissions to Melcher by failing to disclose that Face It allegedly was in concurrent discussions about a potential sale of its company to the Company. The lawsuit alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder, as well as various claims under state law and common law. On January 9, 2018, Mr. Fried initiated an arbitration against the Company in which he alleged that the Company breached advancement obligations to him. On June 11, 2018, the arbitrator ordered the Company to advance the fees Mr. Fried incurs (and has already incurred) in connection with the defense of the Melcher litigation. To date, the Company has advanced approximately $0.5 million in fees and expenses, included in general and administrative expenses, on behalf of Mr. Fried. Regardless of the arbitrator's order, Mr. Fried is required to reimburse the Company for any amounts advanced to him if it is ultimately determined that Mr. Fried is not entitled to indemnification in connection with the Melcher litigation. In addition, the Company believes that it has indemnification rights against the former stockholders of Face It (including Mr. Fried) for all losses that are incurred by the Company in connection with the Melcher litigation, including without limitation, amounts incurred to indemnify or advance the legal fees and expenses of Mr. Fried pursuant to his indemnification claim against the Company. The Company has asserted claims in arbitration against both Mr. Fried and the representative of the former Face It stockholders to recoup these losses. These claims are stayed pending the resolution of the Melcher litigation.

Table of Contents

11. Geographical Information

The following table is a summary of revenues by geographic region based on client billing address and has been estimated based on the amounts billed to clients during the periods (in thousands).

	Year Ended December 31,		
	2018	2017	2016
United States	$239,378	$188,303	$151,484
International	18,286	11,922	10,606
Total revenue	$257,664	$200,225	$162,090

The following table summarizes total property and equipment, net in the respective locations (in thousands).

	December 31,		
	2018	2017	2016
United States	$23,931	$17,949	$13,025
International	1,954	1,939	1,663
Property and equipment, net	$25,885	$19,888	$14,688

12. Retirement Plans

The Company has a 401(k) plan to provide tax deferred salary deductions for all eligible employees. Participants may make voluntary contributions to the 401(k) plan, limited by certain Internal Revenue Service restrictions. The Company is responsible for the administrative costs of the 401(k) plan. The Company does not match employee contributions.

The Company complies with the requirement of maintaining a retirement plan for employees in the Philippines. This plan is a non-contributory and defined benefit type that provides retirement to employees equal to approximately one month salary for every year of credited service for employees who attain the normal retirement of age of 60 with at least five years of service. The benefits are paid in a lump sum amount upon retirement from the Company. Total defined benefit liability was $0.7 million and $0.5 million as of December 31, 2018 and 2017, respectively. Total retirement expense for this plan was $0.1 million, $0.3 million, and $0.1 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Table of Contents

13. Selected Quarterly Financial Data (Unaudited)

Selected quarterly financial information for 2018 and 2017 is as follows:

	Quarter Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
	(unaudited, in thousands, except per share data)							
Revenue	$72,335	$65,304	$61,120	$58,905	$55,403	$50,081	$47,727	$47,014
Cost of revenue [1][2]	28,339	26,179	24,814	24,702	22,363	20,497	20,273	19,971
Gross profit	43,996	39,125	36,306	34,203	33,040	29,584	27,454	27,043
Operating expenses:								
Research and development [1][2]	8,451	9,582	8,367	7,772	6,748	6,689	6,836	6,847
Sales and marketing [1][2]	18,793	17,818	17,912	17,478	17,358	16,502	16,932	15,778
General and administrative [1][2]	10,766	10,746	9,833	9,103	8,767	4,679	6,845	8,860
Total operating expenses	38,010	38,146	36,112	34,353	32,873	27,870	30,613	31,485
Income (loss) from operations	5,986	979	194	(150)	167	1,714	(3,159)	(4,442)
Other income (expense), net:								
Extinguishment of debt	—	—	—	—	—	—	—	—
Interest expense	(3,462)	(3,595)	(2,378)	(810)	(836)	(865)	(888)	(882)
Interest income and other	1,359	1,352	206	398	164	118	90	118
Total other income (expense), net	(2,103)	(2,243)	(2,172)	(412)	(672)	(747)	(798)	(764)
Income (loss) before income taxes	3,883	(1,264)	(1,978)	(562)	(505)	967	(3,957)	(5,206)
Provision for income taxes	150	41	64	45	126	43	50	49
Net income (loss)	$3,733	$(1,305)	$(2,042)	$(607)	$(631)	$924	$(4,007)	$(5,255)
Net income (loss) per share:								
Basic	$0.06	$(0.02)	$(0.04)	$(0.01)	$(0.01)	$0.02	$(0.07)	$(0.10)
Diluted	$0.06	$(0.02)	$(0.04)	$(0.01)	$(0.01)	$0.02	$(0.07)	$(0.10)
Shares used in computing net loss per share:								
Basic	58,926	58,454	57,903	56,399	56,034	55,310	54,723	53,688
Diluted	62,071	58,454	57,903	56,399	56,034	59,441	54,723	53,688

(1) Included stock-based compensation as follows:

	Quarter Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
	(unaudited, in thousands)							
Cost of revenue	$942	$860	$853	$678	$594	$599	$575	$434
Research and development	1,010	2,352	1,064	877	807	797	801	637
Sales and marketing	1,747	1,613	1,585	1,362	1,128	1,084	1,224	928
General and administrative	3,794	4,044	3,295	2,408	2,111	1,240	1,254	1,130
Total stock-based compensation	$7,493	$8,869	$6,797	$5,325	$4,640	$3,720	$3,854	$3,129

Table of Contents

(2) Included depreciation and amortization expenses as follows:

	Quarter Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
	(unaudited, in thousands)							
Cost of revenue	$2,129	$2,021	$1,864	$1,794	$1,611	$1,397	$1,716	$1,576
Research and development	331	278	233	194	170	182	237	206
Sales and marketing	6	30	30	29	30	30	30	30
General and administrative	372	338	322	303	257	272	287	283
Total depreciation and amortization	$2,838	$2,667	$2,449	$2,320	$2,068	$1,881	$2,270	$2,095

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2018.

Based on management's evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2018, our disclosure controls and procedures were designed, and were effective, to provide assurance at a reasonable level that the information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management as appropriate to allow timely decisions regarding required disclosures.

In designing and evaluating our disclosure controls and procedures, management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act). Our management conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2018 based on the criteria set forth in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the assessment, our management has concluded that our internal control over financial reporting was effective as of December 31, 2018 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP.

KPMG LLP, the independent registered public accounting firm that audited our financial statements included in this Annual Report on Form 10-K, has issued an attestation report on our internal control over financial reporting, which is included herein.

Changes in Internal Control over Financial Reporting

During the three months ended December 31, 2018, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents

ITEM 9B. Other Information
None.

Table of Contents

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information concerning our directors, compliance with Section 16(a) of the Exchange Act, our Audit Committee and any changes to the process by which stockholders may recommend nominees to the Board required by this Item are incorporated herein by reference to information contained in our Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ended December 31, 2018, or the 2019 Proxy Statement, including “Proposal No 1. — Election of Directors,” “Corporate Governance” and “Section 16(a) Beneficial Ownership Reporting Compliance.”

The information concerning our executive officers required by this Item is incorporated herein by reference to information contained in the 2019 Proxy Statement including “Executive Officers.”

We have adopted a code of ethics and business conduct, or code of conduct, that applies to all employees, including our principal executive officers, our principal financial officer, and all other executive officers. Our code of conduct is available on our website at http://investors.five9.com/corporate-governance.cfm. We plan to post on our website at the address described above any future amendments or waivers of our code of conduct.

ITEM 11. Executive Compensation

The information required by this Item is incorporated herein by reference to information contained in the 2019 Proxy Statement, including “Corporate Governance,” “Executive Compensation” and “Compensation of Directors.”

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

The information required by this Item is incorporated herein by reference to information contained in the 2019 Proxy Statement, including “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information.”

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

The information required by this Item is incorporated herein by reference to information contained in the 2019 Proxy Statement, including “Corporate Governance” and “Transactions With Related Persons.”

ITEM 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference to information contained in the 2019 Proxy Statement, including “Proposal No. 4 — Ratification of Appointment of Independent Registered Public Accounting Firm.”

Table of Contents

PART IV

ITEM 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this Report:

1. Consolidated Financial Statements

The consolidated financial statements of Five9 and the report of independent registered public accounting firm thereon are set forth under Part II, Item 8 of this report.

Report of Independent Registered Public Accounting Firm	65
Consolidated Balance Sheets	67
Consolidated Statements of Operations and Comprehensive Loss	68
Consolidated Statements of Stockholders' Equity	69
Consolidated Statements of Cash Flows	70
Notes to Consolidated Financial Statements	71

2. Consolidated Financial Statement Schedules

The Financial Statement Schedules not listed have been omitted because the information required to be set forth herein is included in ITEM 8 — Financial Statements and Supplementary Data or they are not applicable or are not required.

3. Exhibits.

The following exhibits are filed with or incorporated by reference in this report. Where such filing is made by incorporation by reference to a previously filed registration statement or report, such registration statement or report is identified in parentheses.

Exhibit Index

Exhibit Number	Description
3.1Ø	Amended and Restated Certificate of Incorporation of Five9, Inc. (filed as Exhibit 3.2 to the Company's Current Report on Form 8-K filed with the SEC on April 10, 2014 (File No. 001-36383) and incorporated by reference herein).
3.2Ø	Amended and Restated Bylaws of Five9, Inc. (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on April 10, 2014 (File No. 001-36383) and incorporated by reference herein).
4.1Ø	Form of Common Stock Certificate (filed as Exhibit 4.1 to Amendment No.1 to the Company's Registration Statement on Form S-1 filed with the SEC on March 24, 2014 (File No. 333-194258) and incorporated by reference herein).
4.2Ø	Eighth Amended and Restated Stockholders' Agreement, dated October 28, 2013, among the Registrant and certain holders of its capital stock, as amended by the First Amendment dated December 20, 2013 and the Second Amendment dated December 30, 2013 (filed as Exhibit 4.2 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on March 24, 2014 (File No. 333-194258) and incorporated by reference herein).
4.3Ø	Joinder to the Eighth Amended and Restated Stockholders' Agreement, dated April 1, 2014 (filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 14, 2014 (File No. 001-36383) and incorporated by reference herein).
4.4Ø	Third Amendment to Eighth Amended and Restated Stockholders' Agreement, dated April 15, 2014 (filed as Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 14, 2014 (File No. 001-36383) and incorporated by reference herein).
4.5Ø	Warrant to purchase shares of series D-2 preferred stock issued to City National Bank (filed as Exhibit 4.4 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).

Table of Contents

Exhibit Index

Exhibit Number	Description
4.6Ø	Form of Warrant to purchase shares of common stock (filed as Exhibit 4.5 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
4.7Ø	Form of Warrant to purchase shares of common stock issued to Fifth Street Finance Corp. and Fifth Street Mezzanine Partners V, L.P. (filed as Exhibit 4.6 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
4.8Ø	Indenture between the Registrant and U.S. Bank National Association, as trustee, dated May 8, 2018 (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on May 8, 2018 (File No. 001-36383) and incorporated by reference herein).
4.9Ø	Form of 0.125% Convertible Senior Notes due 2023 (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed with the SEC on May 8, 2018 (File No. 001-36383) and incorporated by reference herein).
10.1+Ø	Independent Contractor Agreement between the Registrant and Michael Burkland (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 8, 2018 (File No. 001-36383) and incorporated by referenced herein).
10.2+Ø	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers, as amended on July 31, 2015 (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 5, 2015 (File No. 001-36383) and incorporated by referenced herein).
10.3+Ø	Employment Agreement between the Registrant and Michael Burkland (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.4+Ø	Confirmation Letter between the Registrant and Barry Zwarenstein (filed as Exhibit 10.3 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.5+Ø	Offer Letter between the Registrant and Dan Burkland and amendment (filed as Exhibit 10.4 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.6+Ø	Offer Letter between the Registrant and Scott Welch (filed as Exhibit 10.7 to the Company's Annual Report on Form 10-K filed with the SEC on March 10, 2015 (File No. 001-36383) and incorporated by referenced herein).
10.7+Ø	Offer Letter between the Registrant and Rowan Trollope (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on May 1, 2018 (File No. 001-36383) and incorporated by reference herein).
10.8+Ø	Offer Letter between the Registrant and Gaurav Passi (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 1, 2018 (File No. 001-36383) and incorporated by reference herein).
10.9+Ø	Release Agreement between the Registrant and Gaurav Passi dated July 23, 2018 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on July 26, 2018 (File No. 001-36383) and incorporated by reference herein).
10.10+	Offer Letter between the Registrant and Ryan Kam.
10.11+	Offer Letter between the Registrant and James Doran.
10.12+	Offer Letter between the Registrant and David Pickering.
10.13+	Offer Letter between the Registrant and Jonathan Rosenberg.
10.14+Ø	Five9, Inc. Amended and Restated 2004 Equity Incentive Plan (filed as Exhibit 10.8 to Amendment No.2 to the Company's Registration Statement on Form S-1 filed with the SEC on April 3, 2014 (File No.

	333-194258) and incorporated by reference herein).
10.15+Ø	Amendment to Five9, Inc. Amended and Restated 2004 Equity Incentive Plan, effective March 6, 2014 (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 14, 2014 (File No. 001-36383) and incorporated by reference herein).

Table of Contents

Exhibit Index

Exhibit Number	Description
10.16+Ø	Five9, Inc. 2014 Equity Incentive Plan and related form agreements (filed as Exhibit 10.9 to Amendment No.1 to the Company's Registration Statement on Form S-1 filed with the SEC on March 24, 2014 (File No. 333-194258) and incorporated by reference herein).
10.17+Ø	Five9, Inc. 2014 Employee Stock Purchase Plan (filed as Exhibit 10.10 to Amendment No.1 to the Company's Registration Statement on Form S-1 filed with the SEC on March 24, 2014 (File No. 333-194258) and incorporated by reference herein).
10.18+Ø	Key Employee Severance Benefit Plan (filed as Exhibit 10.12 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.19+Ø	Five9 Inc. 2017 Executive Bonus Plan (filed as Exhibit 10.14 to the Company's Annual Report on Form 10-K filed with the SEC on February 28, 2017 (File No. 001-36383) and incorporated by reference herein).
10.20+	Five9 Inc. Non-Employee Director Compensation Policy.
10.21+	Five9 Inc. 2019 Executive Bonus Program.
10.22+Ø	Five9 Inc. 2018 Executive Bonus Program (filed as Exhibit 10.14 to the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2018 (File No. 001-36383) and incorporated by reference herein).
10.23Ø	Office Lease for Bishop Ranch Building, dated December 16, 2011, between the Registrant and Alexander Properties Company and First Lease Addendum dated October 24, 2012, Second Lease Addendum dated January 23, 2014, Third Lease Addendum dated April 3, 2017, Fourth Lease Addendum dated June 30, 2017 and Fifth Lease Addendum dated January 3, 2018 (filed as Exhibit 10.16 to the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2018 (File No. 001-36383) and incorporated by reference herein).
10.24Ø	Equipment Lease Agreement, dated November 8, 2012, between the Registrant and Winmark Capital Corporation (filed as Exhibit 10.20 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.25Ø	Loan and Security Agreement, dated August 1, 2016, by and among Five9, Inc., the lenders party thereto and City National Bank, as agent for such lenders (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on August 3, 2016 (File No. 001-36383) and incorporated by reference herein).
10.26Ø	Second Amendment to Loan and Security Agreement, dated as of May 2, 2018, by and among Five9, Inc., City National Bank and Silicon Valley Bank (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on May 8, 2018 (File No. 001-36383) and incorporated by reference herein).
10.27Ø	Promissory Note, dated July 16, 2013, between the Registrant and Universal Service Administrative Company (filed as Exhibit 10.26 to the Company's Registration Statement on Form S-1 filed with the SEC on March 3, 2014 (File No. 333-194258) and incorporated by reference herein).
10.28Ø	Form of Capped Call Confirmation (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on May 8, 2018 (File No. 001-36383) and incorporated by reference herein).
21.1	Subsidiaries of the Company.
23.1	Consent of KPMG LLP, independent registered public accounting firm.
24.1	Power of Attorney (included on signature page to this Annual Report on Form 10-K).
31.1	Certification of Chief Executive Officer of Five9, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer of Five9, Inc. Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1†	

	Certification of Chief Executive Officer and Chief Financial Officer of Five9, Inc. Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Schema Linkbase Document
101.CAL	XBRL Taxonomy Calculation Linkbase Document

105

Table of Contents

Exhibit Index

Exhibit Number	Description
101.DEF	XBRL Taxonomy Definition Linkbase Document
101.LAB	XBRL Taxonomy Labels Linkbase Document
101.PRE	XBRL Taxonomy Presentation Linkbase Document

Ø Previously filed.
+ Indicates management contract or compensatory plan.
† The certifications attached as Exhibit 32.1 that accompany this Annual Report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Five9, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

Table of Contents

SIGNATURES

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

Five9, Inc.

Date: February 25, 2019 By: /s/ Rowan Trollope
Rowan Trollope
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints Rowan Trollope and Barry Zwarenstein, and each of them, severally, as his or her true and lawful attorneys-in-fact and agents with the power to act, with or without the other, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in his or her capacity as a director or officer or both, as the case may be, of the Company, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents, or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Rowan Trollope Rowan Trollope	Chief Executive Officer, Director (Principal Executive Officer)	February 25, 2019
/s/ Barry Zwarenstein Barry Zwarenstein	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 25, 2019
/s/ Michael Burkland Michael Burkland	Executive Chairman, Director	February 25, 2019
/s/ Jack Acosta Jack Acosta	Director	February 25, 2019
/s/ Kimberly Alexy Kimberly Alexy	Director	February 25, 2019
/s/ Michael Burdiek Michael Burdiek	Director	February 25, 2019
/s/ David DeWalt David DeWalt	Director	February 25, 2019
/s/ David Welsh David Welsh	Director; Lead Independent Director	February 25, 2019

/s/ Robert Zollars Robert Zollars	Director	February 25, 2019