

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

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the year ended December 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission file number: 001-38211

ROKU, INC.

(Exact name of Registrant as specified in its charter)

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

4841
*(Primary standard industrial
code number)*

26-2087865
(I.R.S. employer identification no.)

150 Winchester Circle
Los Gatos, California 95032

(408) 556-9040

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

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

Title of each class	Name of each exchange on which registered
Class A Common Stock, \$0.0001 par value	The Nasdaq Global Select Market

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

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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 such files). Yes No

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging Growth Company	<input type="checkbox"/>		

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.

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

As of June 30, 2018, the aggregate market value of voting stock held by non-affiliates of the registrant, based upon the closing sales price for the registrant's common stock, as reported in the Nasdaq Global Select Market System, was \$2,857,084,378. Shares of common stock beneficially owned by each executive officer and director of the Registrant and by each person known by the Registrant to beneficially own 10% or more of the outstanding common stock 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 any other purpose.

As of January 31, 2019, the registrant had 78,138,197 shares of Class A common stock, \$0.0001 par value per share and 31,869,921 shares of Class B common stock, \$0.0001 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates by reference certain information from the Registrant's definitive proxy statement (the "2018 Proxy Statement") for the 2019 Annual Meeting of Stockholders. The 2018 Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2018.

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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this report, including statements regarding our future results of operations and financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, forward-looking statements may be identified by words such as “anticipate,” “believe,” “continue,” “could,” “design,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially,” “predict,” “project,” “should,” “will” or the negative of these terms or other similar expressions.

Forward-looking statements are based on our management’s beliefs and assumptions and on information currently available. These forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, including risks described in the section titled “Risk Factors” and elsewhere in this Form 10-K, regarding, among other things:

- our financial performance, including our revenue, cost of revenue, operating expenses and our ability to attain and sustain profitability;*
- our ability to attract and retain users and increase hours streamed;*
- our ability to attract and retain advertisers;*
- our ability to attract and retain additional TV brands and service operators to deploy our technology;*
- our ability to acquire rights to distribute popular content on our platform on favorable terms, or at all, including the renewals of our existing agreements with content publishers;*
- changes in consumer viewing habits or the growth of TV streaming;*
- the growth of our relevant markets, including the growth in advertising spend on TV streaming platforms, and our ability to successfully grow our business in those markets;*
- our ability to adapt to changing market conditions and technological developments, including developing integrations with our platform partners;*
- our ability to develop and launch new streaming products and provide ancillary services and support;*
- our ability to compete effectively with existing competitors and new market entrants;*
- our ability to successfully manage domestic and international expansion;*
- our ability to attract and retain qualified employees and key personnel;*
- security breaches and system failures;*
- our ability to maintain, protect and enhance our intellectual property; and*
- our ability to comply with laws and regulations that currently apply or may become applicable to our business both in the United States and internationally, including compliance with the EU General Data Protection Regulation.*

We caution you that the foregoing list may not contain all of the forward-looking statements made in this Annual Report on Form 10-K.

Other sections of this report may include additional factors that could harm our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ from those contained in, or implied by, any forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward-looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report or to conform these statements to actual results or to changes in our expectations. You should read this Annual Report on Form 10-K and the documents that we reference in this Annual Report on Form 10-K and have filed as exhibits to this report with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

Investors and others should note that we may announce material business and financial information to our investors using our investor relations website (ir.roku.com/investor-relations), SEC filings, webcasts, press releases, and conference calls. We use these mediums, including our website, to communicate with investors and the general public about our company, our products, and other issues. It is possible that the information that we make available may be deemed to be material information. We therefore encourage investors and others interested in our company to review the information that we make available on our website.

PART I

Item 1: Business

Overview

Roku pioneered streaming to the TV and we are capitalizing on this large economic opportunity as a leading TV streaming platform for users, content publishers and advertisers. Roku connects users to the streaming content they love, enables content publishers to build and monetize large audiences, and provides advertisers with unique capabilities to engage consumers. As of December 31, 2018, we had 27.1 million active accounts and during 2018 our users streamed 24.0 billion hours on the Roku platform. TV streaming's disruptive content distribution model is shifting billions of dollars of economic value.

Our business model is to grow gross profit by increasing the number of active accounts and related streaming hours, and growing revenue through the monetization of our streaming platform. We measure our platform monetization progress through average revenue per user, or ARPU, which we believe represents the inherent value of our business model. We grow new accounts through three primary channels: we sell streaming players; we partner with TV brands through our Roku TV licensing program; and we have licensing relationships with service operators. The fastest growing source of new accounts comes from our licensing relationships with TV brands and service operators which accounted for 50% of new accounts in 2018, up from 48% in 2017. We believe we have a significant opportunity to grow platform revenue as we further monetize users' engagement with our TV streaming platform through the insertion of targeted video advertising in ad supported channels, our participation in revenues generated through sales of subscriptions and other transactions on our platform, and the placement of audience development and brand sponsorship promotions across our user interface. ARPU was \$17.95 during the year ended December 31, 2018 up by 30% as compared to \$13.78 for the year ended December 31, 2017.

Our Products and Services

Advertising, Content Distribution and Audience Development

We generate advertising revenues primarily by serving video ads to our users and measuring the return on investment of these ads to advertisers. We collect a variety of information on the Roku platform, including user registration data as well as anonymized information like audience engagement, frequency and content-related use of features, and interactions with advertisements. With our co-branded smart TVs, or Roku TVs, we give users the ability to opt-in to use automatic content recognition and other technology to collect information about what users watch via antenna and devices connected to Roku TVs, and we collect data about the use of the Roku TV's home screen and antenna programming guide.

Advertisers on our platform can reach our over the top, or OTT, audience with ads that are more relevant, interactive and measurable than advertising delivered on traditional linear TV. Our advertisers include brand marketers and content publishers who use our advertising services to attract and develop their target audiences and promote their content on our streaming platform. As traditional TV audiences shrink, OTT audiences have become increasingly important to advertisers who must continue to reach large audiences. Our growth in active accounts and hours streamed has attracted more advertisers and content publishers to our TV streaming platform creating a better user experience.

In addition, we continue to refine and advance measurement capabilities on our advertising platform. Through our Measurement Partner Program, we use tools and partners to provide advertisers the capability to measure audience demographics, validate ad effectiveness, and quantify sales lift from advertising on the Roku platform. We offer engagement analytics such as impressions served, click-through rates and video completion rates. We also work with a wide variety of third-party measurement companies to measure the branding impact of the ads we serve. Furthermore, we have relationships with third-party providers that focus on transactional or point of sale data, which enables our advertisers to compare the effectiveness of Roku ads to traditional linear television advertising.

Our primary advertising products include:

- *Video ads.* Our ad-supported content publishers use video ads to monetize our users and we also use video ads to monetize our platform. Video ads are sold within channels on the Roku platform as 15-

second or 30-second spots inserted before a program starts or during a program break. One of the ways we secure video ad insertion rights from content publishers is via our distribution deals with those publishers. In addition, we can also serve as a source of revenue for content publishers who participate on The Roku Channel, and channels that authorize us to fill their unsold advertising inventory. Except for a minority of video ads that are passed unmodified in a traditional linear broadcast, all video ads are selected and delivered to a user in real-time, as the user is engaging on our platform. On the Roku platform, our video ads play full screen, are not skippable in most channels and are delivered into a curated channel list, which alleviates many of the concerns that some digital advertisers have with major online video distributors.

- *Brand sponsorships.* We support a variety of promotional opportunities for advertisers, such as sponsored themes on our home screen and content sponsorships to give users the opportunity to experience a free movie or show (e.g. “Family movie night brought to you by...”). We also sell branded content rows on The Roku Channel.
- *Audience Marketplace.* Through our Audience Marketplace program, we provide advertising buyers and sellers with the means to more effectively target audiences on the Roku platform in the United States. We leverage our first-party data and proprietary ad technology to enhance the ability of publishers to sell targeted audiences on the Roku platform to advertisers.

We utilize a variety of ad placements, particularly native display ads, on the Roku home screen and screen saver to help content publishers drive channel downloads and traffic to their channels in order to drive subscriptions or movie and TV show consumption. We also sell branded channel buttons on player and Roku TV remote controls. The branded buttons provide easy access and drive incremental usage by allowing users to launch straight into the channel.

We provide our content publishers with access to the most engaged OTT audience, as measured by average hours streamed. We negotiate revenue share agreements with content publishers for distribution on the Roku platform. Our platform enables content publishers to distribute streaming content through three primary business models, transaction video on demand, or TVOD, that includes channels that offer a la carte movie purchases or rentals, subscription video on demand, or SVOD, that includes subscriptions to individual video on demand channels and so-called virtual multichannel video programming distribution services, and advertising supported video on demand, AVOD, that includes channels that do not charge a subscription fee to users. We generate revenue from TVOD and SVOD channels from various forms of revenue sharing arrangements. Our revenue sharing arrangements generally apply to new subscriptions for accounts that sign up for new services and at the time of a movie rental or purchase for TVOD. Revenue from the distribution of AVOD channels is generated through the sale of advertising within the channel.

AVOD is our fastest growing distribution model, and we are increasing the monetization of these hours by expanding our advertising capabilities both on and off the Roku platform. We intend to continue to leverage our data and analytics to deliver relevant advertising and improve the ability of our advertisers to optimize their campaigns and measure their results. We also plan to continue to expand our direct sales teams to increase the number of advertisers who use our services.

In late 2017, we launched The Roku Channel, which offers ad-supported free access for users to a collection of films, television series and other content, and at the same time we began a fundamental transition to increase video advertising inventory under our control and to create another way of connecting content publishers with users. The Roku Channel has grown from providing customers with free access to 1,000 movies and TV episodes to roughly 10,000 today and is rapidly becoming one of our leading sources of advertising inventory. In January 2019, we launched Premium Subscriptions within The Roku Channel, through which we resell ad-free premium content subscription services from providers such as Showtime, Starz and Epix directly to our users.

Roku TVs and Streaming Players

We acquire users by offering low cost streaming players and through Roku TVs that are manufactured and sold by TV brands that enter into licensing arrangements with us.

Roku TVs integrate our Roku Operating System, or Roku OS, and leverage our smart TV hardware reference design. We work with our TV brand licensees to assist in all phases of the development of Roku TVs, including development, planning, manufacturing and marketing. Roku TV brand licensees include TCL, Element, Hisense, Hitachi, JVC, RCA, Philips, Sanyo, Sharp, and Magnavox. They are available in sizes ranging from 24” to 75” at leading retailers in the United States, Canada and Mexico. In 2018, more than one in four smart TVs sold in the United States were Roku TVs.

We offer streaming players for sale under the Roku brand in the United States, Canada, the United Kingdom, France, the Republic of Ireland, Mexico and several other Latin American countries. We also license our Roku OS and streaming player designs, and provide ongoing technology and support services, to certain service operators that distribute Roku Powered players to their subscribers. All players run on the Roku OS, and stream content via built-in Ethernet or Wi-Fi capability, depending on the model. Our current streaming player line for the U.S. market includes several models at a range of manufacturers’ suggested retail prices to meet the needs of different users starting at \$29.99.

Technology

We believe that the core technology supporting the Roku OS is a critical competitive advantage and therefore we continue to make substantial investments in our research and development efforts to enhance our platform for users, content publishers and advertisers. We have invested in delivering broad search and discovery capabilities for our users in order to organize and manage the vast amounts of content and pricing information on our platform. Our cloud-based search and discovery features for users are powered by state-of-the-art servers and databases that are purpose-built and support large scale audiences. We have also introduced user experience technology such as private listening and voice search for certain streaming devices.

For content publishers, we offer our open Channel Developer Program to create streaming channels. The Channel Developer Program is based on our Software Development Kit, or SDK, and proprietary implementation of the Brightscript scripting language, which is optimized to provide robust performance and a consistent user experience on any device with the Roku platform. Channel Developers may also take advantage of our feed-based Roku Direct Publisher program, which does not require content publishers to write a single line of code to publish a channel on our platform.

For advertisers, the Roku Ad Framework, or RAF, technology is integrated into the Roku OS. RAF provides a variety of critical and advanced advertising capabilities, including IAB VAST ad processing, interactive rich media features, demographic measurement, device IDs, user privacy controls and compatibility with all major video ad servers, SSPs and DSPs.

Our proprietary systems leverage our feature extraction, information retrieval and matching systems to provide the most relevant ads. The Roku OS also includes our core data platform that manages and analyzes billions of technical and user events and terabytes of uncompressed data that is processed through our platform each day. We use leading big data analytic technologies to identify rich insights to improve user, content publisher and advertiser value from the Roku platform.

Sales and Marketing

We drive growth in our platform by building relationships with content publishers, advertisers, TV brands and service operators. We have dedicated business development teams that develop and maintain relationships, to promote and build awareness of the features and advantages of the Roku platform. Our data science team supports our sales and marketing efforts by analyzing data on our platform to increase effectiveness for our content publishers and advertisers as well as for our consumer marketing campaigns. We enter into distribution agreements with our content publishers and license their content through our dedicated content relationship management team. We sell advertising with two direct sales teams, one focused on content publishers, the other focused on traditional advertisers. Our relationship with content publishers is typically client-direct. We secure direct access to publishers’ video ad inventory as part of our distribution agreements and serve as an additional channel for content publishers to monetize their audience. These sales efforts are differentiated and complementary to that of our content publishers. Whereas our publishers typically sell on a cross-platform basis and feature their brand and content in their sale, we

focus on delivering a large OTT audience across many channels at once. We work with the major ad agencies and holding companies including Dentsu, Havas, Horizon, IPG, Publicis and WPP. We also offer smaller content publishers a self-serve platform to buy promotions and are increasingly incorporating programmatic capabilities into our advertising sales. We work with TV brands to assist in all phases of the development of Roku TVs, including development, planning, manufacturing and marketing, and similarly work with service operators on the planning and development of their Roku Powered players.

We grow our users by providing consumers with low cost, widely available players and TVs and we promote them using a wide range of marketing techniques. Our players and TVs are available at over 16,000 retail locations in the United States, Canada, the United Kingdom, France, the Republic of Ireland, Mexico and several other Latin American countries. The majority of streaming players and Roku TVs are sold in the United States through traditional brick and mortar retailers, such as Best Buy, Target and Walmart, including their online sales platforms, and online retailers such as Amazon. We also sell players in the United States directly through our website. In addition, in some cases, we sell our streaming players to service operators or channel partners who bundle such players with services that they sell to their customers. We also sell products internationally through distributors and to retailers such as Currys in the United Kingdom and Amazon in France. In 2018 and 2017, Amazon, Best Buy and Walmart each accounted for more than 10% of our player revenue. These three retailers collectively accounted for 68% and 61% of our player revenue for the years ended December 31, 2018 and 2017. These retailers also sell products offered by our competitors. We support retailers with an experienced sales management team and work closely with these retailers to assist with in-store marketing and product mix forecasting, leading us to be a category captain in many major retail locations.

Research and Development

Our research and development model relies upon a combination of in-house staff and out-sourced design and manufacturing partners to cost-effectively improve and enhance our platform, and to develop new players, TVs, features and functionality. We work closely with content publishers, advertisers, TV brands and service operators to understand their current and future needs. We have designed a product development process that captures and integrates their feedback. In addition, we solicit user feedback in the development of new features and enhancements to the Roku platform.

We intend to continue to significantly invest in research and development to bring new devices to market and expand our platform and capabilities.

Manufacturing

We outsource the manufacturing of our products to contract manufacturers, using our design specifications. All of our products are manufactured by contract manufacturers located in the People's Republic of China. Our contracts do not obligate them to supply products to us in any specific quantity or at any specific price. Our contract manufacturers procure components and assemble our products to demand forecasts we establish based upon historical trends and analysis from our sales and product management functions. The contract manufacturers ship our products to our third-party warehouses in California and England where they ship players directly to retailers, wholesale distributors and to end users.

Government Regulation

Our devices and platform are subject to numerous domestic and foreign laws and regulations covering a wide variety of subject matters. These laws and regulations include general business regulations and laws, as well as regulations and laws specific to providers of Internet-delivered streaming services and devices. New laws and regulations in these areas may have an adverse effect on our business. The costs of compliance with these laws and regulations are high and are likely to increase in the future. If we fail to comply with these laws, we may be subject to significant liabilities and other penalties.

In particular, our business is subject to foreign and domestic laws and regulations applicable to companies conducting business using the Internet. Both domestic and international jurisdictions vary widely as to how, or whether, existing laws governing areas such as personal privacy and data security, consumer protection, payment processing or sales and other taxes and intellectual property apply to the Internet and e-commerce, and these laws

are continually evolving. Moreover, the laws governing these areas, as well as those governing electronic contracts and Internet content and access restrictions, among other areas, are rapidly evolving. The laws in these areas are unsettled and future developments are unpredictable. Laws that lead to more stringent regulation of companies engaging in businesses using the Internet may have a negative impact on our business.

We are also subject to both general and e-commerce specific privacy laws and regulations that may require us to provide users with our policies on sharing information with third parties and advance notice of any changes to these policies. Related laws may govern the manner in which we store or transfer sensitive information or impose obligations on us in the event of a security breach or inadvertent disclosure of such information. International jurisdictions impose different, and sometimes more stringent, consumer and privacy protections, including the European Union's newly enacted General Data Protection Regulation. Such consumer privacy laws are constantly changing and may become more diverse and restrictive over time, challenging our ability to fully comply with these laws in all jurisdictions. Privacy laws also may limit the ability of advertisers to fully utilize our platform, which could have a negative impact on our business.

Tax regulations in domestic and international jurisdictions where we do not currently collect state or local taxes may subject us to the obligation to collect and remit such taxes, to additional taxes or to requirements intended to assist jurisdictions with their tax collection efforts. New legislation or regulation, the application of laws from jurisdictions whose laws do not currently apply to our business or the application of existing laws and regulations to the Internet and e-commerce generally could result in significant additional taxes on our business. Further, we could be subject to fines or other payments for any past failures to comply with these requirements. The continued growth and demand for e-commerce is likely to result in more laws and regulations that impose additional compliance burdens on e-commerce companies, and any such developments could harm our business.

In addition, the Internet is a vital component of our business and also is subject to a variety of laws and regulations in jurisdictions throughout the world. We expect to rely on the historical openness and accessibility of the Internet to conduct our business, and government regulations that impede or fail to preserve the open Internet could harm our business. To the extent regulatory agencies adopt rules that allow network operators to restrict the flow of content over the Internet, such operators may seek to extract fees from us or our content publishers to deliver our traffic or may otherwise engage in blocking, throttling or other discriminatory practices with respect to our traffic, which could adversely impact our business.

Our content publishers also are subject to a wide range of government regulations that may vary by jurisdiction. Because our business depends on the availability of third-party content delivered over the Internet, increased regulation of our content publishers or changes in laws or regulations governing Internet retransmission of third-party content could increase our expenses and adversely affect our business and the attractiveness of our platform.

Intellectual Property

Our success depends in part upon our ability to protect our intellectual property. We rely on a combination of trade secrets, copyrights, trademarks, patents and domain names to protect our intellectual property. Our trademarks, including "Roku" and the Roku logo and design, are an important part of our branding and the value of our business. As of December 31, 2018, we owned 70 issued U.S. patents (of which 16 are design patents) and 9 issued European Community design patents.

The claims for which we have sought patent protection apply to both our devices and software. Our patent and patent applications generally apply to the features and functions of our Roku OS and the applications associated with our platform.

We also incorporate generally available third-party software, including open source software, in our Roku OS and our platform, pursuant to licenses with such third parties. The termination of these software licenses would require redesign of parts of the Roku OS and our platform, which could delay or impair our ability to offer our devices and platform.

We enter into confidentiality agreements with employees, consultants and business partners, and generally control access and use of our proprietary and other confidential information through the use of internal and external controls. These steps may not be adequate, however, and may not be effective to protect our intellectual property in the United States or other international markets in which we do business. Third parties may infringe or misappropriate our intellectual property rights or may challenge our issued patents. If we fail to adequately protect our intellectual property rights, our competitors could offer similar products and services which would harm our business.

Competition

The market for streaming media is continuing to grow and evolve. We face substantial competition from large technology and consumer electronics companies including Amazon, Google and Apple. These competitors have helped to increase consumer awareness of TV streaming and have contributed to the growth and evolution of the overall streaming media marketplace. However, their resources and brand recognition pose significant competitive challenges. In the face of this competition, our success in capitalizing on the expanding opportunities in the streaming market will depend on our ability to acquire users by delivering high quality devices at competitive prices and developing and monetizing engaged audiences with compelling content, promotional services and advertising.

Employees

As of December 31, 2018, we had 1,111 full-time employees, of which 624 were in research and development, 304 were in sales and marketing, and 183 were in general and administrative and operations. None of our employees are represented by a labor union with respect to his or her employment. We have not experienced any work stoppages and we consider our relations with our employees to be good.

Information about Segment and Geographic Areas

The segment and geographic information required herein is contained in Note 15 to the Consolidated Financial Statements in Item 8, which is incorporated herein by reference.

Corporate Information

We originally formed in October 2002 as Roku LLC under the laws of the State of Delaware. On February 1, 2008, Roku LLC was converted into Roku, Inc. a Delaware corporation. We completed our initial public offering, or the IPO, in October 2017 and our Class A common stock is listed on The Nasdaq Global Select Market under the symbol of "ROKU". Our website address is www.roku.com. Information contained on or accessible through our website is not a part of this report and the inclusion of our website address in this report is an inactive textual reference only. Roku, the Roku logo and other trade names, trademarks or service marks of Roku appearing in this report are the property of Roku. Trade names, trademarks and service marks of other companies appearing in this report are the property of their respective holders.

Available Information

We make available, free of charge through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports, filed or furnished pursuant to Sections 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the Securities Exchange Commission, or SEC. The SEC maintains an internet site (<http://www.sec.gov>) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Our website address is www.roku.com. Information contained on or accessible through these websites is not incorporated by reference nor otherwise included in this report, and any references to these websites are intended to be inactive textual references only.

Item 1A. Risk Factors

Our business involves significant risks, some of which are described below. You should carefully consider the risks and uncertainties described below, together with all the other information in this Annual Report on Form 10-K, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and the related notes. If any of the following risks actually occurs, our business, reputation, financial condition, results of operations, revenue, and future prospects could be seriously harmed. Unless otherwise indicated, references to our business being harmed in these risk factors will include harm to our business, reputation, financial condition, results of operations, revenue, and future prospects. In that event, the market price of our Class A common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Industry

We have incurred operating losses in the past, expect to incur operating losses in the future and may never achieve or maintain profitability.

We began operations in 2002 and we have experienced net losses and negative cash flows from operations in each year since inception. As of December 31, 2018, we had an accumulated deficit of \$253.9 million and for the year ended December 31, 2018, we experienced a net loss of \$8.9 million. We expect our operating expenses to increase in the future as we expand our operations. If our revenue and gross profit do not grow at a greater rate than our operating expenses, we will not be able to achieve and maintain profitability. We expect to incur significant losses in the future for a number of reasons, including without limitation the other risks and uncertainties described herein. Additionally, we may encounter unforeseen operating or legal expenses, difficulties, complications, delays and other factors that may result in losses in future periods. If our expenses exceed our revenue, we may never achieve or maintain profitability and our business may be harmed.

TV streaming is highly competitive and many companies, including large technology companies, content owners and aggregators, TV brands and service operators, are actively focusing on this industry. If we fail to differentiate ourselves and compete successfully with these companies, it will be difficult for us to attract and retain users and our business will be harmed.

TV streaming is increasingly competitive and global. Our success depends in part on attracting and retaining users on, and effective monetization of, our TV streaming platform. To attract and retain users, we need to be able to respond efficiently to changes in consumer tastes and preferences and continue to increase the type and number of content offerings. Effective monetization requires us to continue to update the features and functionality of our streaming platform for users, content publishers and advertisers. We must also effectively support the most popular sources of streaming content, such as Netflix, Amazon Prime Video, Hulu and YouTube and respond rapidly to actual and anticipated market trends in the U.S. TV streaming industry.

Companies such as Amazon, Apple and Google offer TV streaming devices that compete with our streaming players and Roku TV. In addition, Google licenses its operating system software for integration into smart TVs and service provider set top boxes and Amazon licenses its operating system software for integration into smart TVs. These companies have the financial resources to subsidize the cost of their streaming devices in order to promote

their other products and services making it harder for us to acquire new users and increase hours streamed. These companies could also implement standards or technology that are not compatible with our products or that provide a better streaming experience on competitive products. These companies also promote their brands through traditional forms of advertising, such as TV commercials, as well as internet advertising or website product placement, and have greater resources than us to devote to such efforts.

In addition, many TV brands, such as LG, Samsung Electronics Co., Ltd. and VIZIO, Inc., offer their own TV streaming solutions within their TVs. Other devices, such as Microsoft's Xbox and Sony's PlayStation game consoles and many DVD and Blu-ray players, also incorporate TV streaming functionality. Similarly, some service operators, such as Comcast and Altice, offer TV streaming applications as part of their cable service plans and can leverage their existing consumer bases, installation networks, broadband delivery networks and name recognition to gain traction in the TV streaming market. If consumers of TV streaming content prefer these alternative products to Roku streaming players and Roku TVs, we may not be able to achieve our expected growth in player revenue or gross profit.

In July 2018, we launched our new Roku TV Wireless Speaker product line, designed specifically for use with Roku TVs. As a result, we may face additional competition from makers of TV audio speakers and soundbars, as well as makers of other TV peripheral devices. While our wireless speaker products have not generated significant revenue, if our wireless speaker products do not operate as designed, do not achieve marketplace acceptance, or do not enhance or produce the benefits to the Roku TV viewing experience as we intend, our users' overall viewing experience may be diminished, and this may impact the overall demand for Roku TVs or other Roku products.

We expect competition in TV streaming from the large technology companies and service operators described above, as well as new and growing companies, to increase in the future. This increased competition could result in pricing pressure, lower revenue and gross profit or the failure of our players, Roku TV and our platform to gain or maintain broad market acceptance. To remain competitive and maintain our position as a leading TV streaming provider we need to continuously invest in product development, marketing, service and support and device distribution infrastructure. In addition, evolving TV standards such as 4K, 8K, HDR and unknown future developments may require further investments in the development of our players, Roku TV and our platform. We may not have sufficient resources to continue to make the investments needed to maintain our competitive position. In addition, most of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than us, which provide them with advantages in developing, marketing or servicing new products and offerings. As a result, they may be able to respond more quickly to market demand, devote greater resources to the development, promotion and sales of their products or the distribution of their content, and influence market acceptance of their products better than we can. These competitors may also be able to adapt more quickly to new or emerging technologies or standards and may be able to deliver products and services at a lower cost. Increased competition could reduce our market share, revenue and operating margins, increase our operating costs, harm our competitive position and otherwise harm our business.

We also compete for video viewing hours with mobile platforms (phones and tablets), and users may prefer to view streaming content on such devices. Increased use of mobile platforms for video streaming could adversely impact the growth of our streaming hours, harm our competitive position and otherwise harm our business.

We may not be successful in our efforts to further monetize our streaming platform, which may harm our business.

Our business model depends on our ability to generate platform revenue from advertisers and content publishers. We generate platform revenue primarily from the video advertising and audience development campaigns that run across our platform and from our content partners on a transactional basis when new subscriptions are purchased and content transactions occur on our platform. As such, we are seeking to expand our user base and increase the number of hours that are streamed across our platform in an effort to create additional platform revenue opportunities. The total number of hours streamed, however, does not correlate with platform revenue on a period-by-period basis, because we do not monetize every hour streamed on our platform. As our user base grows and as we increase the amount of content offered and streamed across our platform, we must effectively monetize our expanding user base and streaming activity. Moreover, streaming hours on our platform are measured

whenever a Roku player or a Roku TV is streaming content, whether a viewer is actively watching or not. For example, if a Roku player is connected to a TV, and the viewer turns off the TV, steps away or falls asleep and does not stop or pause the player then the particular streaming channel may auto-play subsequent content for a period of time determined by the streaming channel. We believe that this also occurs across a wide variety of non-Roku streaming devices and other set-top boxes.

Our ability to deliver more relevant advertisements to our users and to increase our platform's value to advertisers and content publishers depends on the collection of user engagement data, which may be restricted or prevented by a number of factors. Users may decide to opt out or restrict our ability to collect personal viewing data or to provide them with more relevant advertisements. Content publishers may also refuse to allow us to collect data regarding user engagement or refuse to implement mechanisms we request to ensure compliance with our legal obligations or technical requirements. For example, we are not able to fully utilize program level viewing data from many of our most popular channels to improve the relevancy of advertisements provided to our users. Other channels available on our platform, such as Amazon Prime Video, Hulu and YouTube, are focused on increasing user engagement and time spent within their channel by allowing them to purchase additional content and streaming services within their channels. In addition, we do not currently monetize content provided on non-certified channels on our platform. If our users spend most of their time within particular channels where we have limited or no ability to place advertisements or leverage user information, or users opt out from our ability to collect data for use in providing more relevant advertisements, then we may not be able to achieve our expected growth in platform revenue or gross profit. If we are unable to further monetize our platform, our business may be harmed.

To date, the majority of the hours streamed on our platform have consisted of subscription video on demand content; however, in order to materially increase the monetization of our platform through the sale of video advertising, we will need our users to stream significantly more ad-supported content. Our efforts to monetize our platform through ad-supported content is still developing and may not grow as we expect. Further, while we have experienced, and expect to continue to experience, growth in our advertising revenue as we have expanded our user base and streaming hours, our efforts to monetize our platform through the sale of advertising video on demand content are still developing and our revenue from advertising video on demand offerings may not grow as we expect. This means of monetization will require us to continue to attract advertising dollars to our platform as well as deliver advertising video on demand content that appeals to users. Accordingly, there can be no assurance that we will be successful in monetizing our platform through the sale of advertising-supported video.

We depend on a small number of content publishers for a majority of our streaming hours, and if we fail to maintain these relationships, our business could be harmed, even though the revenues received, directly or indirectly, from streaming on certain of these channels has not been significant to our overall revenue.

Historically, a small number of content publishers have accounted for a significant portion of the content streamed across our platform and the terms and conditions of our relationships with content publishers vary. In the year ended December 31, 2018, and December 31, 2017, Netflix and YouTube accounted for a majority of all hours streamed in each period. However, although YouTube's free ad-supported channel is the most viewed ad-supported channel and the second most viewed channel overall by hours streamed on our platform for the year ended December 31, 2018 we do not receive material revenue from it. In addition, our agreements with content publishers generally have a term of one to three years and can be terminated before the end of the term by the content publisher under certain circumstances, such as if we materially breach the agreement, become insolvent, enter bankruptcy, commit fraud or fail to adhere to the content publishers' security requirements. If we fail to maintain our relationships with the content publishers on terms favorable to us, or at all, or if these content publishers face problems in delivering their content across our platform, we may lose channel partners or users and our business may be harmed.

We operate in an evolving industry, which makes it difficult to evaluate our business and prospects. If TV streaming develops more slowly than we expect, our operating results and growth prospects could be harmed. In addition, our future growth depends on the growth of TV streaming advertising.

TV streaming is a relatively new and rapidly evolving industry, making our business and prospects difficult to evaluate. The growth and profitability of this industry and the level of demand and market acceptance for our products and streaming platform are subject to a high degree of uncertainty. We believe that the continued growth of streaming as an entertainment alternative will depend on the availability and growth of cost-effective broadband internet access, the quality of broadband content delivery, the quality and reliability of new devices and technology, the cost for users relative to other sources of content, as well as the quality and breadth of content that is delivered across streaming platforms. These technologies, products and content offerings continue to emerge and evolve. Users, content publishers or advertisers may find TV streaming platforms to be less attractive than traditional TV, which would harm our business. In addition, many advertisers continue to devote a substantial portion of their advertising budgets to traditional advertising, such as TV, radio and print. The future growth of our business depends on the growth of TV streaming advertising, and on advertisers increasing spend on such advertising. We cannot be certain that they will do so. If advertisers do not perceive meaningful benefits of TV streaming advertising, then this market may develop more slowly than we expect, which could adversely impact our operating results and our ability to grow our business.

If we are unable to maintain an adequate supply of quality video ad inventory on our platform, our business may be harmed.

We may fail to attract content publishers that generate sufficient quantity or quality of ad-supported content hours on our platform and continue to grow supply of quality video ad inventory. Our business model depends on our ability to grow video ad inventory on our platform and sell it to advertisers. We grow video ad inventory by adding and retaining content publishers on our platform with ad-supported channels that we can monetize. In addition, our access video ad inventory in ad-supported streaming channels on our platform varies greatly among channels, accordingly, we do not have access to all of the video ad inventory on our platform. For certain channels, including YouTube's ad supported channel, we have no access to video ad inventory at this time, and we may not secure access in the future. The amount, quality and cost of video ad inventory available to us can change at any time. If we are unable to grow and maintain a sufficient supply of quality video advertising inventory at reasonable costs to keep up with demand, our business may be harmed.

We operate in a highly competitive industry and we compete for advertising revenue with other internet streaming platforms and services, as well as traditional media, such as radio, broadcast, cable and satellite TV and satellite and internet radio. These competitors offer content and other advertising mediums that may be more attractive to advertisers than our TV streaming platform. These competitors are often very large and have more advertising experience and financial resources than we do, which may adversely affect our ability to compete for advertisers and may result in lower revenue and gross profit from advertising. If we are unable to increase our advertising revenue by, among other things, continuing to improve our platform's data capabilities to further optimize and measure advertisers' campaigns, increase our advertising inventory and expand our advertising sales team and programmatic capabilities, our business and our growth prospects may be harmed. We may not be able to compete effectively or adapt to any such changes or trends, which would harm our ability to grow our advertising revenue and harm our business.

Our players and Roku TVs must operate with various offerings, technologies and systems from our content publishers that we do not control. If Roku devices do not operate effectively with those offerings, technologies and systems, our business may be harmed.

Our Roku OS is designed for performance using relatively low-cost hardware, which enables us to drive user growth with our players and Roku TVs offered at a low cost to consumers. However, our hardware must be interoperable with all channels and other offerings, technologies and systems from our content publishers, including virtual multi-channel video programming distributors such as Sling TV. We have no control over these offerings, technologies and systems beyond our channel certification requirements, and if our players do not provide our users with a high-quality experience on those offerings on a cost-effective basis or if changes are made to those offerings

that are not compatible with our players, we may be unable to increase user growth and content hours streamed, we may be required to increase our hardware costs and our business will be harmed. We plan to continue to introduce new products regularly and we have experienced that it takes time to optimize such products to function well with these offerings, technologies and systems. In addition, many of our largest content publishers have the right to test and certify our new products before we can publish their channels on new products. These certification processes can be time consuming and introduce third party dependencies into our product release cycles. If content publishers do not certify new products on a timely basis or require us to make changes in order to obtain certifications, our product release plans may be adversely impacted. To continue to grow our active accounts and user engagement, we will need to prioritize development of our products to work better with new offerings, technologies and systems. If we are unable to maintain consistent operability of Roku devices that is on parity with or better than other platforms, our business could be harmed. In addition, any future changes to offerings, technologies and systems from our content publishers such as virtual service operators may impact the accessibility, speed, functionality, and other performance aspects of our products, which issues are likely to occur in the future from time to time. We may not successfully develop products that operate effectively with these offerings, technologies or systems. If it becomes more difficult for our users to access and use these offerings, technologies or systems, our business could be harmed.

Changes in consumer viewing habits could harm our business.

The manner in which consumers access streaming content is changing rapidly. As the technological infrastructure for internet access continues to improve and evolve, consumers will be presented with more opportunities to access video, music and games on-demand with interactive capabilities. Time spent on mobile devices is growing rapidly, in particular by young adults streaming video content, including popular streaming channels like Netflix and YouTube, as well as content from cable or satellite providers available live or on-demand on mobile devices. In addition, personal computers, smart TVs, DVD players, Blu-ray players, gaming consoles and cable set top boxes allow users to access streaming entertainment content. If other streaming or technology providers are able to respond and take advantage of changes in consumer viewing habits and technologies better than us, our business could be harmed.

New entrants may enter the TV streaming market with unique service offerings or approaches to providing video. In addition, our competitors may enter into business combinations or alliances that strengthen their competitive positions. If new technologies render the TV streaming market obsolete or we are unable to successfully compete with current and new competitors and technologies, our business will be harmed, and we may not be able to increase or maintain our market share and revenue.

If we fail to obtain or maintain popular content, we may fail to retain existing users and attract new users.

We have invested a significant amount of time to cultivate relationships with our content publishers; however, such relationships may not continue to grow or yield further financial results. We must continuously maintain existing relationships and identify and establish new relationships with content publishers to provide popular content. In order to remain competitive, we must consistently meet user demand for popular streaming channels and content; particularly as we launch new players or enter new markets, including international markets. If we are not successful in helping our content publishers launch and maintain streaming channels that attract and retain a significant number of users on our platform or if we are not able to do so in a cost-effective manner, our business will be harmed. Our ability to successfully help content publishers maintain and expand their channel offerings on a cost-effective basis largely depends on our ability to:

- effectively market new streaming channels and enhancements to our existing streaming channels;
- minimize launch delays of new and updated streaming channels; and
- minimize platform downtime and other technical difficulties.

If we fail to help our content publishers maintain and expand their channel offerings our business may be harmed.

If the advertising and audience development campaigns on our platform are not relevant or not engaging to our users, our growth in active accounts and hours streamed may be adversely impacted.

We have made, and are continuing to make, investments to enable advertisers and content providers to deliver relevant advertisements and audience development campaigns to users on our platform. Existing and prospective advertisers and content providers may not be successful in serving ads and audience development campaigns that lead to and maintain user engagement. Those ads and campaigns may seem irrelevant, repetitive or overly targeted and intrusive. We are continuously seeking to balance the objectives of our users and advertisers with our desire to provide an optimal user experience, but we may not be successful in achieving a balance that continues to attract and retain users and advertisers. If we do not introduce relevant advertisements and audience development campaigns or such advertisements and audience development campaigns are overly intrusive and impede the use of our TV streaming platform, our users may stop using our platform which will harm our business.

The Roku Channel may not continue to attract a large number of users and/or generate significant advertising revenues, and our users may not purchase Premium Subscriptions.

We operate “The Roku Channel,” which offers both ad-supported free access for users to a collection of films, television series and other content as well as “Premium Subscriptions,” which we launched in January 2019, allowing our users to pay for ad-free content from various content providers, all on one streaming channel. Although the Roku Channel was a top five channel on our platform based on the number of active accounts that accessed the channel at least once in the quarter ended December 31, 2018 other than through our Premium Subscriptions feature, we do not receive subscriptions or other fees from users that access content on The Roku Channel. We have incurred, and will continue to incur, costs and expenses in connection with the launch, development, expansion and operation of The Roku Channel, which we monetize through advertising and selling Premium Subscriptions. If our users do not continue to stream the free, ad-supported content we make available on The Roku Channel or purchase Premium Subscriptions, we will not have the opportunity to monetize The Roku Channel through revenue generated from advertising as well as Premium Subscriptions. In order to attract users to the ad-supported content on The Roku Channel and drive streaming of ad-supported video on The Roku Channel, we must secure rights to stream content that is appealing to our users and advertisers. In part, we do this by directly licensing certain content from content owners, such as television and movie studios. The agreements that we enter into with these content owners have varying terms and provide us with rights to make specific content available through The Roku Channel during certain periods of time. Upon expiration of these agreements, we are required to re-negotiate and renew these agreements with the content owners, or enter into new agreements with other content owners, in order to obtain rights to distribute additional titles or to extend the duration of the rights previously granted. If for any period of time, we are unable to enter into content license agreements on acceptable terms to access content that enables us to attract and retain users of the ad-supported content on The Roku Channel, usage of The Roku Channel may decline, and our business may be harmed. Furthermore, if the advertisements on The Roku Channel are not relevant to our users or such advertisements are overly intrusive and impede our users’ enjoyment of the content we make available, our users may not stream content and view advertisements on The Roku Channel, and The Roku Channel may not generate sufficient advertising revenues to be cost effective for us to operate, regardless of our ability to sell Premium Subscriptions. In addition, we recently began distributing The Roku Channel on platforms other than our own streaming platform, and there can be no assurance that we will be successful in attracting a large number of users and/or generating significant advertising revenues through the distribution of The Roku Channel on such other streaming platforms.

Our growth will depend in part upon our ability to develop relationships with TV brands and, to a lesser extent, service operators.

We developed, and intend to continue to develop, relationships with TV brands and service operators in both the United States and international markets. Our licensing arrangements are complex and time-consuming to negotiate and complete. Our current and potential partners include TV brands, cable and satellite companies and telecommunication providers. Under these license arrangements, we generally have limited control over the amount and timing of resources these entities dedicate to the relationship. If our TV brand or service operator partners fail to meet their forecasts for distributing licensed devices, our business may be harmed.

We license our Roku OS to certain TV brands to manufacture co-branded smart TVs, or Roku TVs. The primary economic benefits that we derive from these license arrangements have been and will likely continue to be indirect, primarily from growing our active accounts and increasing hours streamed. We have not received, nor do we expect to receive significant license revenue from these arrangements in the near term, but we expect to incur expenses in connection with these commercial agreements. If these arrangements do not result in increased users and hours streamed, our business may be harmed. The loss of a relationship with a TV brand or service operator could harm our results of operations, damage our reputation, increase pricing and promotional pressures from other partners and distribution channels or increase our marketing costs. If we are not successful in maintaining existing and creating new relationships with any of these third parties, or if we encounter technological, content licensing or other impediments to our development of these relationships, our ability to grow our business could be adversely impacted.

If our users sign up for offerings and services outside of our platform or through other channels on our platform, our business may be harmed.

We earn revenue by acquiring subscribers for certain of our content publishers activated on or through our platform. If users do not use our platform for these purchases or subscriptions for any reason, and instead pay for services directly with content publishers or by other means that we do not receive attribution for, our business may be harmed. In addition, certain channels available on our platform allow users to purchase additional streaming services from within their channels. The revenues we earn from these transactions are generally not equivalent to the revenues we earn from activations on or through our platform that we receive full attribution credit for. Accordingly, if users activate their subscriptions for content or services through other channels on our platform, our business may be harmed.

If we were to lose the services of our Chief Executive Officer or other members of our senior management team, we may not be able to execute our business strategy.

Our success depends in a large part upon the continued service of key members of our senior management team. In particular, our founder, President and Chief Executive Officer, Anthony Wood, is critical to our overall management, as well as the continued development of our devices and the Roku platform, our culture and our strategic direction. All of our executive officers are at will employees, and we do not maintain any key person life insurance policies. The loss of any member of our senior management team could harm our business.

If we are unable to attract and retain highly qualified employees, we may not be able to continue to grow our business.

Our ability to compete and grow depends in large part on the efforts and talents of our employees. Our employees, particularly engineers and other product developers, are in high demand, and we devote significant resources to identifying, hiring, training, successfully integrating and retaining these employees. As competition with other companies increases, we may incur significant expenses in attracting and retaining high quality engineers and other employees. The loss of employees or the inability to hire additional skilled employees as necessary to support the rapid growth of our business and the scale of our operations could result in significant disruptions to our business, and the integration of replacement personnel could be time-consuming and expensive and cause additional disruptions to our business.

We believe a critical component to our success and our ability to retain our best people is our culture. As we continue to grow and develop a public company infrastructure, we may find it difficult to maintain our entrepreneurial, execution-focused culture. In addition, many of our employees, may be able to receive significant proceeds from sales of our equity in the public markets, which may reduce their motivation to continue to work for us. Moreover, the equity ownership of many of our employees could create disparities in wealth among our employees, which may harm our culture and relations among employees and our business.

Most of our agreements with content publishers are not long term. Any disruption in the renewal of such agreements may result in the removal of certain content from our platform and may harm our active account growth and engagement.

We enter into agreements with all our content publishers, which have varying expiration dates; typically over one to three years. Upon expiration of these agreements, we are required to re-negotiate and renew these agreements in order to continue providing offerings from these content publishers on our platform. We may not be able to reach a satisfactory agreement before our existing agreements have expired. If we are unable to renew such agreements on a timely basis, we may be required to temporarily or permanently remove certain content from our platform. The loss of such content from our platform for any period of time may harm our business.

If our content publishers do not continue to develop channels for our platform and participate in new features that we may introduce from time to time, our business may be harmed.

As our platform and products evolve, we will continue to introduce new features, which may or may not be attractive to our content publishers or meet their requirements. For example, some content publishers have elected not to participate in our cross-channel search feature, our integrated advertising framework, known as RAF, or have imposed limits on our data gathering for usage within their channels. In addition, our platform utilizes our proprietary Brightscript scripting language in order to allow our content publishers to develop and create channels on our platform. If we introduce new features or utilize a new scripting language in the future, such a change may not comply with our content publishers' certification requirements. In addition, our content publishers may find other languages, such as HTML5, more attractive to develop for and shift their resources to developing their channels on other platforms. If content publishers do not find our platform simple and attractive to develop channels for, do not value and participate in all of the features and functionality that our platform offers, or determine that our software developer kit or new features of our platform do not meet their certification requirements, our business may be harmed.

Our quarterly operating results may be volatile and are difficult to predict, and our stock price may decline if we fail to meet the expectations of securities analysts or investors.

Our revenue, gross profit and other operating results could vary significantly from quarter-to-quarter and year-to-year and may fail to match our past performance due to a variety of factors, including many factors that are outside of our control. Factors that may contribute to the variability of our operating results and cause the market price of our Class A common stock to fluctuate include:

- the entrance of new competitors or competitive products in our market, whether by established or new companies;
- our ability to retain and grow our active account base and increase engagement among new and existing users;
- our ability to maintain effective pricing practices, in response to the competitive markets in which we operate or other macroeconomic factors, such as inflation or increased product taxes;
- our revenue mix, which drives gross profit;
- seasonal or other shifts in advertising revenue or player sales;
- the timing of the launch of new or updated products, streaming channels or features;
- the addition or loss of popular content;
- the ability of retailers to anticipate consumer demand;
- an increase in the manufacturing or component costs of our players or the manufacturing or component costs of our TV brand licensees for Roku TVs; and
- an increase in costs associated with protecting our intellectual property, defending against third-party intellectual property infringement allegations or procuring rights to third-party intellectual property.

Our gross margins vary across our devices and platform offerings. Player revenue has a lower gross margin compared to platform revenue derived through our arrangements with advertising, content distribution, billing and licensing activities. Gross margins on our players vary across player models and can change over time as a result of product transitions, pricing and configuration changes, component costs, player returns and other cost fluctuations. In addition, our gross margin and operating margin percentages, as well as overall profitability, may be adversely impacted as a result of a shift in device, geographic or sales channel mix, component cost increases, price competition, or the introduction of new players, including those that have higher cost structures with flat or reduced pricing. We have in the past and may in the future strategically reduce our player gross margin in an effort to increase our active accounts and grow our gross profit. As a result, our player revenue may not increase as rapidly as it has historically, or at all, and, unless we are able to adequately increase our platform revenue and grow our active accounts, we may be unable to grow gross profit and our business will be harmed. If a reduction in gross margin does not result in an increase in our active accounts and gross profit, our financial results may suffer, and our business may be harmed.

Our revenue and gross profit are subject to seasonality and if our sales during the holiday season fall below our expectations, our business may be harmed.

Seasonal consumer shopping patterns significantly affect our business. Specifically, our revenue and gross profit are traditionally strongest in the fourth quarter of each fiscal year and represent a high percentage of the total net revenue for such fiscal year due to higher consumer purchases and increased advertising during holiday periods. Furthermore, a significant percentage of our player sales through retailers in the fourth quarter are pursuant to committed sales agreements with retailers for which we recognize significant discounts in the average selling prices in the third quarter in an effort to grow our active accounts, which will reduce our player gross margin.

Given the seasonal nature of our player sales, accurate forecasting is critical to our operations. We anticipate that this seasonal impact on revenue and gross profit is likely to continue and any shortfall in expected fourth quarter revenue, due to macroeconomic conditions, a decline in the effectiveness of our promotional activities, actions by our competitors or disruptions in our supply or distribution chain, or for any other reason, would cause our full year results of operations to suffer significantly. For example, delays or disruptions at U.S. ports of entry could adversely affect our or our licensees' ability to timely deliver players and co-branded Roku TVs to retailers during the holiday season. A substantial portion of our expenses are personnel related and include salaries, stock-based compensation and benefits that are not seasonal in nature. Accordingly, in the event of a revenue shortfall, we would be unable to mitigate the negative impact on margins, at least in the short term, and our business would be harmed.

We and our TV brand partners depend on our retail sales channels to effectively market and sell our players and Roku TVs, and if we or our partners fail to maintain and expand effective retail sales channels we could experience lower player or Roku TV sales.

To continue to acquire new active accounts, we must maintain and expand our retail sales channels. The majority of our players and Roku TVs are sold through traditional brick and mortar retailers, such as Best Buy, Target and Walmart, including their online sales platforms, and online retailers such as Amazon. To a lesser extent, we sell players directly through our website and internationally through distributors. For the year ended December 31, 2018, Amazon, Best Buy and Walmart in total accounted for 68% of our player revenue and are expected to each account for more than 10% of our player revenue in fiscal 2019. These three retailers collectively accounted for 61% of our player revenue for the years ended December 31, 2017 and 2016. These retailers and our international distributors also sell products offered by our competitors. We have no minimum purchase commitments or long-term contracts with any of these retailers or distributors. If one or several retailers or distributors were to discontinue selling our players or Roku TVs or choose not to prominently display those devices in their stores or on their websites, the volume of Roku devices sold could decrease, which would harm our business. For example, in April 2018, Amazon and Best Buy announced a partnership whereby two Best Buy controlled smart TV brands will exclusively utilize Amazon's operating system, and such TVs will be sold by Best Buy and Amazon. Although this arrangement is not expected to limit our TV brand partners' ability to sell on either Amazon or at Best Buy, if our existing TV brands choose to work with other operating system developers, this may impact our Roku TV program and our ability to continue to grow active accounts. Traditional retailers have limited shelf and end cap space in their

stores and limited promotional budgets, and online retailers have limited prime website product placement space. Competition is intense for these resources, and a competitor with more extensive product lines and stronger brand identity, such as Apple or Google, possesses greater bargaining power with retailers. In addition, one of our online retailers, Amazon, sells its own competitive TV streaming products and is able to market and promote these products more prominently on its website, and could refuse to offer our devices. Any reduction in our ability to place and promote our devices, or increased competition for available shelf or website placement, would require us to increase our marketing expenditures simply to maintain our product visibility, which may harm our business. In particular, the availability of product placement during peak retail periods, such as the holiday season, is critical to our revenue growth, and if we are unable to effectively sell our devices during these periods, our business would be harmed.

If our efforts to build a strong brand and maintain customer satisfaction and loyalty are not successful, we may not be able to attract or retain users, and our business may be harmed.

Building and maintaining a strong brand is important to attract and retain users, as potential users have a number of TV streaming choices. Successfully building a brand is a time consuming and comprehensive endeavor and can be positively and negatively impacted by any number of factors. Some of these factors, such as the quality or pricing of our players or our customer service, are within our control. Other factors, such as the quality and reliability of Roku TVs and the quality of the content that our content publishers provide, may be out of our control, yet users may nonetheless attribute those factors to us. Our competitors may be able to achieve and maintain brand awareness and market share more quickly and effectively than we can. Many of our competitors are larger companies and promote their brands through traditional forms of advertising, such as print media and TV commercials, and have substantial resources to devote to such efforts. Our competitors may also have greater resources to utilize internet advertising or website product placement more effectively than we can. If we are unable to execute on building a strong brand, it may be difficult to differentiate our business and platform from our competitors in the marketplace, therefore our ability to attract and retain users may be adversely affected and our business may be harmed.

Our streaming platform allows our customers to choose from thousands of channels, representing a variety of content from a wide range of content publishers. Our customers can choose and control which channels they download and watch, and they can use parental control settings to prevent channels from being downloaded to our devices. While we have policies that prohibit the publication of content that is unlawful, incites illegal activities or violates third-party rights, among other things, we may distribute channels that include controversial content. Controversies related to the content included on certain of the channels that we distribute could result in negative publicity, cause harm to our reputation and brand or subject us to claims and may harm our business.

We must successfully manage streaming device and other product introductions and transitions in order to remain competitive.

We must continually develop new and improved streaming devices and other products that meet changing consumer demands. Moreover, the introduction of a new streaming device or other product is a complex task, involving significant expenditures in research and development, promotion and sales channel development. For example, in 2018, we introduced our new Roku TV Wireless Speaker, designed specifically for use with Roku TVs. Whether users will broadly adopt new products is not certain. Our future success will depend on our ability to develop new and competitively priced streaming devices and other products and add new desirable content and features to our platform. Moreover, we must introduce new streaming devices and other products in a timely and cost-effective manner, and we must secure production orders for those products from our contract manufacturers. The development of new products is a highly complex process, and while our research and development efforts are aimed at solving increasingly complex problems, we do not expect that all of our projects will be successful. The successful development and introduction of new products depends on a number of factors, including the following:

- the accuracy of our forecasts for market requirements beyond near term visibility;
- our ability to anticipate and react to new technologies and evolving consumer trends;
- our development, licensing or acquisition of new technologies;

- our timely completion of new designs and development;
- the ability of our contract manufacturer to cost-effectively manufacture our new products;
- the availability of materials and key components used in manufacturing; and
- our ability to attract and retain world-class research and development personnel.

If any of these or other factors becomes problematic, we may not be able to develop and introduce new products in a timely or cost-effective manner, and our business may be harmed.

We do not have manufacturing capabilities and primarily depend upon few contract manufacturers, and our operations could be disrupted if we encounter problems with the contract manufacturers.

We do not have any internal manufacturing capabilities and primarily rely upon one contract manufacturer, Foxconn Industrial Internet Co. Ltd., or Foxconn, to build our players. We similarly rely on one contract manufacturer, Tonly Electronics Holdings Ltd., or Tonly, to manufacture our wireless speakers. Our contract manufacturers may be vulnerable to capacity constraints and reduced component availability, and our control over delivery schedules, manufacturing yields and costs, particularly when components are in short supply or when we introduce a new player or other product or feature, is limited. In addition, we have limited control over Foxconn's or Tonly's quality systems and controls, and therefore must rely on them to manufacture our players and other products to our quality and performance standards and specifications. Delays, component shortages and other manufacturing and supply problems could impair the retail distribution of our players and other products and ultimately our brand. Furthermore, any adverse change in our contract manufacturers' financial or business condition could disrupt our ability to supply players to our retailers and distributors.

Our contracts with our contract manufacturers generally do not obligate them to supply our players or other products in any specific quantity or at any specific price. In the event our contracts manufacturers are unable to fulfill our production requirements in a timely manner or decide to terminate their relationship with us, our order fulfillment may be delayed, and we would have to identify, select and qualify acceptable alternative contract manufacturers. Alternative contract manufacturers may not be available to us when needed or may not be in a position to satisfy our production requirements at commercially reasonable prices or to our quality and performance standards. Any significant interruption in manufacturing at one of our contract manufacturers would require us to reduce our supply of players or other products to our retailers and distributors, which in turn would reduce our revenue. In addition, the Foxconn and Tonly facilities are located in the People's Republic of China and may be subject to political, economic, social and legal uncertainties that may harm our relationships with these parties. We believe that the international location of these facilities increases supply risk, including the risk of supply interruptions. Furthermore, any manufacturing issues affecting the quality of our products, including wireless speakers, players, could harm our business.

If either of our contract manufacturers fail for any reason to continue manufacturing our players or other products in required volumes and at high quality levels, or at all, we would have to identify, select and qualify acceptable alternative contract manufacturers. Alternative contract manufacturers may not be available to us when needed or may not be in a position to satisfy our production requirements at commercially reasonable prices or to our quality and performance standards. Any significant interruption in manufacturing at a contract manufacturer could require us to reduce our supply of players or other products to our retailers and distributors, which in turn would reduce our revenue and user growth.

Certain of our Roku TV brand partners do not have manufacturing capabilities and primarily depend upon contract manufacturers, and the supply of Roku TVs to the market could be disrupted if they encounter problems with their contract manufacturers or suppliers.

Certain of our Roku TV brand partners do not have internal manufacturing capabilities and primarily rely upon contract manufacturers to build the Roku TVs that they sell to retailers. Their contract manufacturers may be vulnerable to capacity constraints and reduced component availability, and their control over delivery schedules, manufacturing yields and costs, particularly when components are in short supply may be limited. Delays,

component shortages and other manufacturing and supply problems could impair the retail distribution of their Roku TVs. A significant interruption in the supply of Roku TVs to retailers and distributors could, in turn, reduce our user growth.

Furthermore, any manufacturing issues affecting the quality of our Roku TV brand partners' Roku TVs, could harm our brand and our business.

Changes in general economic conditions, geopolitical conditions, U.S. trade policies and other factors beyond our control may adversely impact our business and operating results.

Our businesses are subject to risks generally associated with doing business abroad, such as foreign governmental regulation in the countries in which our manufacturing sources are located. Our operations and performance depend significantly on global, regional and U.S. economic and geopolitical conditions. For example, there has been discussion and dialogue regarding potential significant changes to U.S. trade policies, legislation, treaties and tariffs, including the North American Free Trade Agreement, or NAFTA. On November 30, 2018 the United States, Mexico, and Canada signed a replacement trade deal for NAFTA, known as the United States-Mexico-Canada Agreement, or USMCA, which still needs to be ratified by the respective government of each of the three countries. The USMCA could undergo changes that lead to further modifications of certain USMCA provisions before being passed into law. Furthermore, the current administration has threatened tougher trade terms with China and other countries, leading to the imposition of substantially higher U.S. Section 301 tariffs on \$250 billion of imports from China so far and higher Chinese tariffs on a large amount of U.S. exports to China. In addition, the administration has threatened to impose Section 301 tariffs on an additional \$267 billion of imports from China. At this time, it is unknown whether and to what extent new USMCA legislation will be passed into law, whether or how long U.S. tariffs on Chinese goods will remain in effect or whether additional tariffs imposed, or new regulatory proposals will be adopted, whether international trade agreements will be negotiated or existing free trade agreements re-negotiated, or the effect that any such action would have, either positively or negatively, on our industry or our business or licensees. If any new legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or terminated, or if tariffs are imposed on foreign-sourced or U.S. goods, it may be inefficient and expensive for us to alter our business operations in order to adapt to or comply with such changes. Such operational changes could have a material adverse effect on our business, financial condition, results of operations or cash flows.

Also, various countries, in addition to the United States, regulate the import and export of certain technology, including import and export licensing requirements, and have enacted laws that could limit our ability to distribute our products or could limit our commercial and/or strategic partners ability to implement our products in those countries. Changes in our products or future changes in export and import regulations may create delays in the introduction of our products in international markets, prevent our commercial and/or strategic partners with international operations from deploying our products globally or, in some cases, prevent the export or import of our products to certain countries, governments, or persons altogether. Any change in export or import regulations, the imposition of customs duties on intangible goods such as cross-border data flows which are currently duty-free under the WTO's temporary e-commerce moratorium, economic sanctions or related legislation, increased export and import controls stemming governmental policies, or change in the countries, governments, persons or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or new customers in international markets. Any decreased use of our products or limitation on our ability to export or sell our products would harm our business.

If we fail to accurately forecast our manufacturing requirements and manage our inventory with our contract manufacturers, we could incur additional costs, experience manufacturing delays and lose revenue.

We bear supply risk under our contract manufacturing arrangements with Foxconn and Tonly. Lead times for the materials and components that our contract manufacturers orders on our behalf through different component suppliers vary significantly and depend on numerous factors, including the specific supplier, contract terms and market demand for a component at a given time. Lead times for certain key materials and components incorporated into our players are currently lengthy, requiring our contract manufacturer to order materials and components several months in advance. If we overestimate our production requirements, our contract manufacturer may

purchase excess components and build excess inventory. If our contract manufacturer, at our request, purchase excess components that are unique to our players or build excess players, we could be required to pay for these excess components or players. In the past, we have agreed to reimburse our contract manufacturer for purchased components that were not used as a result of our decision to discontinue players or the use of particular components. If we incur costs to cover excess supply commitments, this would harm our business.

Conversely, if we underestimate our player or other product requirements, our contract manufacturers may have inadequate component inventory, which could interrupt the manufacturing of our players or other products and result in delays or cancellation of orders from retailers and distributors. In addition, from time to time we have experienced unanticipated increases in demand that resulted in the need to ship players via air freight, which is more expensive than ocean freight, and adversely affected our player gross margin during such periods of high demand, for example, during end-of-year holidays. If we fail to accurately forecast our manufacturing requirements, our business may be harmed.

Our players incorporate key components from sole source suppliers and if our contract manufacturer is unable to source these components on a timely basis, due to fabrication capacity issues or other material supply constraints, we will not be able to deliver our players to our retailers and distributors.

We depend on sole source suppliers for key components in our players. Our players utilize specific system on chip, or SoC, Wi-Fi silicon products and Wi-Fi front-end modules from various manufacturers, depending on the player, for which we do not have a second source. Although this approach allows us to maximize player performance on lower cost hardware, reduce engineering qualification costs and develop stronger relationships with our strategic suppliers, this also creates supply chain risk. These sole source suppliers could be constrained by fabrication capacity issues or material supply issues, stop producing such components, cease operations or be acquired by, or enter into exclusive arrangements with, our competitors or other companies. Any such interruption or delay may force us to seek similar components from alternative sources, which may not be available. Switching from a sole source supplier would require that we redesign our players to accommodate new components and would require us to re-qualify our players with regulatory bodies, such as the Federal Communications Commission, or FCC, which would be costly and time-consuming.

Our reliance on sole source suppliers involves a number of additional risks, including risks related to:

- supplier capacity constraints;
- price increases;
- timely delivery;
- component quality; and
- delays in, or the inability to execute on, a supplier roadmap for components and technologies.

Any interruption in the supply of sole source components for our players could adversely affect our ability to meet scheduled player deliveries to our retailers and distributors, result in lost sales and higher expenses and harm our business.

If we have difficulty managing our growth in operating expenses, our business could be harmed.

We have experienced significant growth in research and development, sales and marketing, support services and operations in recent years and expect to continue to expand these activities. Our historical growth has placed, and expected future growth will continue to place, significant demands on our management, as well as our financial and operational resources, to:

- manage a larger organization;
- hire more employees, including engineers with relevant skills and experience;
- expand our manufacturing and distribution capacity;

- increase our sales and marketing efforts;
- broaden our customer support capabilities;
- support a larger number of TV brand and service operators;
- implement appropriate operational and financial systems;
- expand internationally; and
- maintain effective financial disclosure controls and procedures.

In addition, due to the continued growth in our headcount, we have recently entered into lease agreements for a new corporate headquarters, and we will start to incur material expenses in future years, beginning in 2019.

If we fail to manage our growth effectively, we may not be able to execute our business strategies and our business will be harmed.

We may be unable to successfully expand our international operations, including our recent expansion into Latin America. In addition, our international expansion plans, if implemented, will subject us to a variety of risks that may harm our business.

We currently generate the vast majority of our revenue in the United States and have limited experience marketing, selling and supporting our players and monetizing our platform outside the United States. In addition, we have limited experience managing the administrative aspects of a global organization. We currently sell our players in Canada, the United Kingdom, the Republic of Ireland, France and several Latin American countries. While we intend to continue to explore opportunities to expand our business in international markets in which we see compelling opportunities to build relationships with users, advertisers and retail distributors, TV brands and service operators, we may not be able to create or maintain international market demand for our players and TV streaming platform. In addition, as we expand our operations internationally, our support organization will face additional challenges, including those associated with delivering support, training and documentation in languages other than English. We may also be subject to new statutory restrictions and risks. For example, we have been subject to the EU General Data Protection Regulation, or GDPR, since May 2018. The GDPR includes detailed requirements related to the collection, storage and use of data related to people resident in the EU and places new data protection obligations and restrictions on organizations and may require us to make further change our policies and procedures in the future beyond what we have already done. Further, following a referendum in June 2016 in which voters in the United Kingdom approved an exit from the European Union, the United Kingdom government has initiated a process to leave the European Union, known as Brexit. Brexit has created uncertainty with regard to the regulation of data protection in the United Kingdom. In particular, although the United Kingdom enacted a Data Protection Act in May 2018 that is designed to be consistent with the GDPR, uncertainty remains regarding how data transfers to and from the United Kingdom will be regulated. We made changes to our data protection compliance program to prepare for the GDPR and will continue to monitor the implementation and evolution of global data protection regulations, but if we are not compliant with GDPR requirements, we may be subject to significant fines and our business may be harmed. In addition, there may be no foreign equivalents to the Digital Millennium Copyright Act to shield us from liability in connection with infringing materials that content publishers may make available on our platform. In addition, we may be required in international jurisdictions to offer longer warranty periods than we currently offer in the United States. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business and financial condition may be harmed.

In the course of expanding our international operations and operating overseas, we will be subject to a variety of risks, including:

- differing regulatory requirements, including country-specific data privacy and security laws and regulations, consumer protection laws and regulations, tax laws, trade laws, labor regulations, tariffs, export quotas, custom duties on cross-border movements of goods or data flows, or other trade restrictions;
- the slower adoption and acceptance of streaming products in other countries;
- competition with existing local traditional pay TV services and products;
- greater difficulty supporting and localizing our players and platform;
- our ability to deliver or provide access to popular streaming channels to users in certain international markets;
- different or unique competitive pressures as a result of, among other things, the presence of local consumer electronics companies and the greater availability of free content on over-the-air channels in certain countries;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, compensation and benefits and compliance programs;
- differing legal and court systems, including limited or unfavorable intellectual property protection;
- risk of change in international political or economic conditions;
- restrictions on the repatriation of earnings; and
- working capital constraints.

If we experience higher player returns than we expect and are unable to resell such returned players as refurbished players, our business could be harmed.

We offer customers who purchase players through our website 30 days to return such players. We also generally honor the return policies of our retail and distribution partners, who typically allow customers to return players, even with open packaging within certain time periods that may exceed 30 days. We generally resell any returned players as refurbished players. In the event we decide to permanently reduce the retail prices of our players, we provide price protection to certain distribution partners for the players they hold in inventory at the time of the price drop. To the extent we experience a greater number of returns than we expect, are unable to resell returned players as refurbished players or are required to provide price protection in amounts greater than we expect, our business could be harmed.

We are subject to payment-related risks and, if our advertisers or advertising agencies do not pay or dispute their invoices, our business may be harmed.

Many of our contracts with advertising agencies provide that if the advertiser does not pay the agency, the agency is not liable to us, and we must seek payment solely from the advertiser, a type of arrangement called sequential liability. Contracting with these agencies, which in some cases have or may develop higher-risk credit profiles, may subject us to greater credit risk than if we were to contract directly with advertisers. This credit risk may vary depending on the nature of an advertising agency's aggregated advertiser base. We may also be involved in disputes with agencies and their advertisers over the operation of our platform or the terms of our agreements. If we are unable to collect or make adjustments to bills, we could incur write-offs for bad debt, which could have a material adverse effect on our results of operations for the periods in which the write-offs occur. In the future, bad debt may exceed reserves for such contingencies and our bad debt exposure may increase over time. Any increase in write-offs for bad debt could have a materially negative effect on our business, financial condition and operating results. If we are not paid by our advertisers or advertising agencies on time or at all, our business may be harmed.

Any significant disruption in our computer systems or those of third parties we utilize in our operations could result in a loss or degradation of service on our platform and could harm our business.

We rely on the expertise of our engineering and software development teams for the performance and operation of our platform and computer systems. Service interruptions, errors in our software or the unavailability of computer systems used in our operations could diminish the overall attractiveness of our devices and platform to existing and potential users. We utilize computer systems located either in our facilities or those of third-party server hosting providers and third-party internet-based or cloud computing services. Although we generally enter into service level agreements with these parties, we exercise no control over their operations, which makes us vulnerable to any errors, interruptions or delays that they may experience. In the future, we may transition additional features of our services from our managed hosting systems to cloud computing services, which may require significant expenditures and engineering resources. If we are unable to manage a transition effectively, we may experience operational delays and inefficiencies until the transition is complete. Upon the expiration or termination of any of our agreements with third-party vendors, we may not be able to replace their services in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us, and a transition from one vendor to another vendor could subject us to operational delays and inefficiencies until the transition is complete. In addition, fires, floods, earthquakes, power losses, telecommunications failures, break-ins and similar events could damage these systems and hardware or cause them to fail completely. As we do not maintain entirely redundant systems, a disrupting event could result in prolonged downtime of our operations and could adversely affect our business. Any disruption in the services provided by these vendors could have adverse impacts on our business reputation, customer relations and operating results.

If any aspect of our computer systems or those of third parties we utilize in our operations fails, it may lead to downtime or slow processing time, either of which may harm the experience of users. We have experienced, and may in the future experience, service disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors and capacity constraints. We expect to continue to make significant investments in our technology infrastructure to maintain and improve the user experience and platform performance. To the extent that we do not effectively address capacity constraints, upgrade our systems as needed and continually develop our technology and network architecture to accommodate increasingly complex services and functions, increasing numbers of users, and actual and anticipated changes in technology, our business may be harmed.

Significant disruptions of our information technology systems or data security incidents could harm our reputation and our business and subject us to liability.

We are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we collect, store, process and transmit large amounts of sensitive corporate and other information, including intellectual property, proprietary business information, user information and other confidential information. It is critical that we do so in a secure manner to maintain the confidentiality, integrity and availability of such information. Our ability to maintain the confidentiality, integrity and availability of personal information in our possession or control create potential legal liability, both from regulators as well as from affected consumers, and also impacts the attractiveness of our subscription service to existing and potential members. We have also outsourced elements of our operations (including elements of our information technology infrastructure) to third parties, or may have incorporated technology into our platform, that collects, processes, transmits and stores our users' personal and credit card information, and as a result, we manage a number of third-party vendors who may or could have access to our computer networks or to confidential information that moves across our platform. In addition, many of those third parties in turn subcontract or outsource some of their responsibilities to third parties. As a result, our information technology systems, including the functions of third parties that are involved or have access to those systems, is very large and complex. While all information technology operations are inherently vulnerable to inadvertent or intentional security breaches, incidents, attacks and exposures, the size, complexity, accessibility and distributed nature of our information technology systems, and the large amounts of sensitive or personal information stored on those systems, make such systems potentially vulnerable to unintentional or malicious, internal and external attacks on our technology environment. Vulnerabilities can be exploited from inadvertent or intentional actions of our employees, third-party vendors, business partners, or by malicious third parties. Attacks of this nature are increasing in their frequency, levels of persistence, sophistication and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives

(including, but not limited to, industrial espionage) and expertise, including organized criminal groups, “hacktivists,” nation states and others. In addition to the extraction of sensitive or personal information, such attacks could include the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information. Some of these external threats may be amplified by the nature of our third-party web hosting, cloud computing, or network-dependent streaming services or suppliers. Our systems likely experience directed attacks on at least a periodic basis that are intended to interrupt our operations, interrupt our customers’ ability to access our services, extract money from our company, and/or obtain our data (including without limitation customer or employee personal information or proprietary information). Although we have implemented certain systems, processes, and safeguards intended to thwart attackers and mitigate risks to our systems and data, we cannot be certain that threat actors will not have a material impact on our systems or services in the future.

We maintain limited insurance policies to cover losses relating to our systems. However, there may be exceptions to our insurance coverage such that our insurance policies may not cover some or all aspects of a security incident. Even where an incident is covered by our insurance, the insurance limits may not cover the costs of complete remediation and redress that we may be faced with in the wake of a security incident. Though it is difficult to determine what harm may directly result from any specific interruption or breach, any failure to maintain performance, reliability, security and availability of our network infrastructure to the satisfaction of our users or regulators may harm our reputation and our ability to retain existing users and attract new users. Because of our prominence in the TV streaming industry, we believe we may be a particularly attractive target for hackers. Our platform also incorporates licensed software from third-parties, including open source software, and we may also be vulnerable to attacks that focus on such third-party software. Any attempts by hackers to disrupt our platform, our devices, website, computer systems or our mobile apps, if successful, could harm our business, subject us to liability, be expensive to remedy, cause harm to our systems and operations and damage our reputation. Efforts to prevent hackers from entering our computer systems or exploiting vulnerabilities in our devices are expensive to implement and may not be effective in detecting or preventing intrusion or vulnerabilities. Such unauthorized access to users’ data could damage our reputation and our business and could expose us of the risk to contractual damages, litigation and regulatory fines and penalties that could harm our business. The risk of harm to our business caused by security incidents may also increase as we expand our product and service offerings and as we enter into new markets. Implementing, maintaining, and updating security safeguards requires substantial resources now and will likely be an increasing and substantial cost in the future.

Significant disruptions of our third-party vendors’ and/or commercial partners’ information technology systems or other similar data security incidents could adversely affect our business operations and/or result in the loss, misappropriation, and/or unauthorized access, use or disclosure of, or the prevention of access to, sensitive information, which could harm our business. In addition, information technology system disruptions, whether from attacks on our technology environment or from computer viruses, natural disasters, terrorism, war and telecommunication and electrical failures, could result in a material disruption of our product development and our business operations.

There is no way of knowing with certainty whether we have experienced any data security incidents that have not been discovered. While we have no reason to believe this to be the case, attackers have become very sophisticated in the way they conceal access to systems, and many companies that have been attacked are not aware that they have been attacked. Any event that leads to unauthorized access, use or disclosure of personal information, including but not limited to personal information regarding our customers, could disrupt our business, harm our reputation, compel us to comply with applicable federal and/or state breach notification laws and foreign law equivalents, subject us to time consuming, distracting and expensive litigation, regulatory investigation and oversight, mandatory corrective action, require us to verify the correctness of database contents, or otherwise subject us to liability under laws, regulations and contractual obligations, including those that protect the privacy and security of personal information. This could result in increased costs to us and result in significant legal and financial exposure and/or reputational harm. In addition, any failure or perceived failure by us or our vendors or business partners to comply with our privacy, confidentiality or data security-related legal or other obligations to third parties, or any further security incidents or other unauthorized access events that result in the unauthorized access, release or transfer of sensitive information, which could include personally identifiable information, may result in governmental investigations, enforcement actions, regulatory fines, litigation, or public statements against

us by advocacy groups or others, and could cause third parties, including current and potential partners, to lose trust in us or we could be subject to claims by third parties that we have breached our privacy- or confidentiality-related obligations, which could materially and adversely affect our business and prospects. Moreover, data security incidents and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above. While we have implemented security measures intended to protect our information technology systems and infrastructure, as well as the personal and proprietary information that we possess or control, there can be no assurance that such measures will successfully prevent service interruptions or further security incidents. Data protection laws around the world often take a principled, risk-based approach to information security and require “reasonable”, “appropriate” or “adequate” technical and organizational security measures, meaning that the interpretation and application of those laws are often uncertain and evolving, and there can be no assurance that our security measures will be deemed adequate or reasonable in all instances. In addition to potential fines, we could be subject to mandatory corrective action due to a data security incident, which could adversely affect our business operations and result in substantial costs for years to come.

Changes in how network operators manage data that travel across their networks could harm our business.

Our business relies upon the ability of consumers to access high-quality streaming content through the internet. As a result, the growth of our business depends on our users’ ability to obtain low-cost, high-speed access to the internet, which relies in part on the network operators’ continuing willingness to upgrade and maintain their equipment as needed to sustain a robust internet infrastructure as well as their continued willingness to preserve the open and interconnected nature of the internet. We exercise no control over network operators, which makes us vulnerable to any errors, interruptions or delays in their operations. Any material disruption in internet services could harm our business.

To the extent that the number of internet users continues to increase, network congestion could adversely affect the reliability of our platform. We may also face increased costs of doing business if network operators engage in discriminatory practices with respect to streamed video content in an effort to monetize access to their networks by data providers. In the past, ISPs have attempted to implement usage-based pricing, bandwidth caps and traffic “shaping” or throttling. To the extent network operators were to create tiers of internet access service and either charge us for access to these tiers or prohibit our content offerings from being available on some or all of these tiers, our quality of service could decline, our operating expenses could increase and our ability to attract and retain customers could be impaired, each of which would harm our business.

In addition, most network operators that provide consumers with access to the internet also provide these consumers with multichannel video programming. These network operators have an incentive to use their network infrastructure in a manner adverse to the continued growth and success of other companies seeking to distribute similar video programming. To the extent that network operators are able to provide preferential treatment to their own data and content, as opposed to ours, our business could be harmed.

We could become subject to litigation regarding intellectual property rights that could be costly, result in the loss of rights important to our devices and platform or otherwise harm our business.

Some internet, technology and media companies, including some of our competitors, own large numbers of patents, copyrights and trademarks, which they may use to assert claims against us. Third parties have asserted, and may in the future assert, that we have infringed, misappropriated or otherwise violated their intellectual property rights. As we face increasing competition, the possibility of intellectual property rights claims against us will grow. Plaintiffs who have no relevant product revenue may not be deterred by our own issued patents and pending patent applications in bringing intellectual property rights claims against us. The cost of patent litigation or other proceedings, even if resolved in our favor, could be substantial. Some of our competitors may be better able to sustain the costs of such litigation or proceedings because of their substantially greater financial resources. Patent litigation and other proceedings may also require significant management time and divert management from our business. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace. The occurrence of any of the foregoing could harm our business.

As a result of intellectual property infringement claims, or to avoid potential claims, we may choose or be required to seek licenses from third parties. These licenses may not be available on commercially reasonable terms, or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, with the potential for our competitors to gain access to the same intellectual property. In addition, the rights that we secure under intellectual property licenses may not include rights to all of the intellectual property owned or controlled by the licensor, and the scope of the licenses granted to us may not include rights covering all of the products and services provided by us and our licensees. Furthermore, an adverse outcome of a dispute may require us to pay damages, potentially including treble damages and attorneys' fees, if we are found to have willfully infringed a party's intellectual property; cease making, licensing or using technologies that are alleged to infringe or misappropriate the intellectual property of others; expend additional development resources to redesign our solutions; enter into potentially unfavorable royalty or license agreements in order to obtain the right to use necessary technologies, content or materials; and to indemnify our partners and other third parties. In addition, any lawsuits regarding intellectual property rights, regardless of their success, could be expensive to resolve and would divert the time and attention of our management and technical personnel.

Under our agreements with many of our content publishers, licensees, distributors, retailers, contract manufacturers and suppliers, we are required to provide indemnification in the event our technology is alleged to infringe upon the intellectual property rights of third parties.

In certain of our agreements we indemnify our content publishers, licensees, distributors, retailers, manufacturing partners and suppliers. We could incur significant expenses defending these partners if they are sued for patent infringement based on allegations related to our technology. If a partner were to lose a lawsuit and in turn seek indemnification from us, we also could be subject to significant monetary liabilities. In addition, because the devices sold by our licensing partners and TV brands often involve the use of third-party technology, this increases our exposure to litigation in circumstances where there is a claim of infringement asserted against the player in question, even if the claim does not pertain to our technology.

If we fail to protect or enforce our intellectual property or proprietary rights, our business and operating results could be harmed.

We regard the protection of our patents, trade secrets, copyrights, trademarks, trade dress, domain names and other intellectual property or proprietary rights as critical to our success. We strive to protect our intellectual property rights by relying on federal, state and common law rights, as well as contractual restrictions. We seek to protect our confidential proprietary information, in part, by entering into confidentiality agreements and invention assignment agreements with all our employees, consultants, contractors, advisors and any third parties who have access to our proprietary know-how, information or technology. However, we cannot be certain that we have executed such agreements with all parties who may have helped to develop our intellectual property or who had access to our proprietary information, nor can we be certain that our agreements will not be breached. Any party with whom we have executed such an agreement could potentially breach that agreement and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. We cannot guarantee that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Detecting the disclosure or misappropriation of a trade secret and enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, time-consuming and could result in substantial costs and the outcome of such a claim is unpredictable. Further, the laws of certain foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property or proprietary rights both in the United States and abroad. If we are unable to prevent the disclosure of our trade secrets to third parties, or if our competitors independently develop any of our trade secrets, we may not be able to establish or maintain a competitive advantage in our market, which could harm our business.

We have filed and will in the future file patent applications on inventions that we deem to be innovative. There is no guarantee that our patent applications will issue as granted patents, that the scope of the protection gained will be sufficient or that an issued patent may subsequently be deemed invalid or unenforceable. Patent laws, and scope of coverage afforded by them, have recently been subject to significant changes, such as the change to “first-to-file” from “first-to-invent” resulting from the Leahy-Smith America Invents Act. This change in the determination of inventorship may result in inventors and companies having to file patent applications more frequently to preserve rights in their inventions, which may favor larger competitors that have the resources to file more patent applications. Another change to the patent laws may incentivize third parties to challenge any issued patent in the United States Patent and Trademark Office, or USPTO, as opposed to having to bring such an action in U.S. federal court. Any invalidation of a patent claim could have a significant impact on our ability to protect the innovations contained within our devices and platform and could harm our business.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions to maintain patent applications and issued patents. We may fail to take the necessary actions and to pay the applicable fees to obtain or maintain our patents. Noncompliance with these requirements can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to use our technologies and enter the market earlier than would otherwise have been the case.

We pursue the registration of our domain names, trademarks and service marks in the United States and in certain locations outside the United States. We are seeking to protect our trademarks, patents and domain names in an increasing number of jurisdictions, a process that is expensive and time-consuming and may not be successful or which we may not pursue in every location.

Litigation may be necessary to enforce our intellectual property or proprietary rights, protect our trade secrets or determine the validity and scope of proprietary rights claimed by others. Any litigation of this nature, regardless of outcome or merit, could result in substantial costs, adverse publicity or diversion of management and technical resources, any of which could adversely affect our business and operating results. If we fail to maintain, protect and enhance our intellectual property or proprietary rights, our business may be harmed.

We and our third-party contractors collect, process, transmit and store the personal information of our users, which creates legal obligations and exposes us to potential liability.

We collect, process, transmit and store information about our users’ device usage patterns, and rely on third-party contractors to collect, process, transmit and store personal information of our users, including our users’ credit card data. Further, we and third parties use tracking technologies, including cookies, device identifiers and related technologies, to help us manage and track our users’ interactions with our platform, devices, website and partners’ content streaming channels and deliver relevant advertising for ourselves and on behalf of our partners on our devices.

We collect information about the interaction of users with our devices, our advertisements, and our partners’ streaming channels. To deliver relevant advertisements effectively, we must successfully leverage this data as well as data provided by third parties. Our ability to collect and use such data could be restricted by a number of factors, including consumers having the ability to opt out from our collection and use of this data for advertising purposes or the ability of our advertisers to use such data to provide more relevant advertisements, restrictions imposed by advertisers, content publishers and service providers, changes in technology, and new developments in laws, regulations and industry standards. For example, our privacy policy outlines the type of data we collect and discloses to users how to disable or restrict such data collection and the use of such data in providing more relevant advertisements. Any restrictions on our ability to collect or use data could harm our ability to grow our revenue, particularly our advertising revenue which depends on engaging the relevant recipients of advertising campaigns.

Various federal, state, and foreign laws and regulations govern the collection, use, retention, sharing and security of the data we receive from and about our users. The regulatory environment for the collection and use of consumer data by device manufacturers, online service providers, content distributors, advertisers and publishers is very unsettled in the United States and internationally. Privacy groups and government bodies, including the Federal

Trade Commission, or FTC, state attorneys general, and the European Commission, have increasingly scrutinized privacy issues with respect to devices that link personal identities or user and device data, with data collected through the internet, and we expect such scrutiny to continue to increase. The United States and foreign governments have enacted and are considering regulations that could significantly restrict industry participants' ability to collect, use and share personal information and pseudonymous data, such as by regulating the level of consumer notice and consent required before a company can place cookies or other tracking technologies. For example, we have been subject to GDPR since May 2018. The GDPR includes detailed requirements related to the collection, storage and use of data related to people resident in the EU and places new data protection obligations and restrictions on organizations and may require us to make further change our policies and procedures in the future beyond what we have already done. Further, following a referendum in June 2016 in which voters in the United Kingdom approved an exit from the European Union, the United Kingdom government has initiated a process to leave the European Union, known as Brexit. Brexit has created uncertainty with regard to the regulation of data protection in the United Kingdom. In particular, although the United Kingdom enacted a Data Protection Act in May 2018 that is designed to be consistent with the GDPR, uncertainty remains regarding how data transfers to and from the United Kingdom will be regulated. We made changes to our data protection compliance program to prepare for the GDPR and will continue to monitor the implementation and evolution of global data protection regulations, but if we are not compliant with GDPR requirements, we may be subject to significant fines and our business may be harmed. In addition, the California Consumer Privacy Act, or CCPA, goes into effect in January 2020, with a lookback to January 2019, and places additional requirements on the handling of personal data. The CCPA was recently amended, and it is possible that it will be amended again before it goes into effect. The potential effects of this legislation are far-reaching and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. For example, the CCPA gives California residents expanded rights to access and require deletion of their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA also provides for civil penalties for violations, as well as a private right of action for data breaches that may increase data breach litigation. We are continuing to assess the impact of the CCPA and proposed amendments to the law on our business.

Applicable data privacy and security laws also obligate us to employ reasonable security measures that are appropriate to the nature of the data we collect and process and the risks attendant to our data processing activities, among other factors, in order to protect personal information from unauthorized access or disclosure, or accidental or unlawful destruction, loss, or alteration. We have implemented security measures that we believe are appropriate, but we cannot be sure a regulator would deem our security measures to be appropriate given the lack of prescriptive measures in certain data protection laws. Without more specific guidance, we cannot know whether our chosen security safeguards are adequate according to each applicable data protection law. Given the evolving nature of security threats and evolving safeguards, we cannot be sure that our chosen safeguards will protect against security threats to our business. Moreover, data protection laws impose on us responsibility for our employees and third parties that assist with aspects of our data processing.

In addition, some countries are considering or have enacted 'data localization' laws requiring that user data regarding users in their country be maintained in their country. Maintaining local data centers in individual countries could increase our operating costs significantly. In addition, we expect that, in addition to the business as usual costs of compliance, the evolving regulatory interpretation and enforcement of new laws such as the GDPR and CCPA will lead to increased operational and compliance costs and will require us to continually monitor and, where necessary, make changes to our operations, policies, and procedures. Any failure or perceived failure to comply with privacy-related legal obligations, or any compromise of security of user data, may result in governmental enforcement actions, litigation, contractual indemnity or public statements against us by consumer advocacy groups or others. In addition to potential liability, these events could harm our business.

We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, industry standards and contractual obligations. Increased regulation of data collection, use and security practices, including self-regulation and industry standards, changes in existing laws, enactment of new laws, increased enforcement activity, and changes in interpretation of laws, could increase our cost of compliance and operation, limit our ability to grow our business or otherwise harm our business.

If service operators refuse to authenticate streaming channels on our platform, our users may be restricted from accessing certain content on our platform and our business may be harmed.

Certain service operators, including pay TV providers, have from time to time refused to grant our users access to streaming content through “TV Everywhere” channels and have made that content available only on certain devices favored by such service operators, including devices offered by that service operator or its partners. If major service operators do not authenticate popular TV Everywhere channels on our platform, we may be unable to offer a broad selection of popular streaming channels and consumers may not purchase or use our streaming players. If we are unable to continue to provide access to popular streaming channels on our platform, our business may be harmed.

United States or international rules that permit ISPs to limit internet data consumption by users, including unreasonable discrimination in the provision of broadband internet access services, could harm our business.

Laws, regulations or court rulings that adversely affect the popularity or growth in use of the internet, including decisions that undermine open and neutrally administered internet access, could decrease customer demand for our service offerings, may impose additional burdens on us or could cause us to incur additional expenses or alter our business model.

On February 26, 2015, the FCC adopted open internet rules intended to protect the ability of consumers and content producers to send and receive non-harmful, lawful information on the internet, known as the Open Internet Order. The FCC’s Open Internet Order prohibited broadband internet access service providers from: (i) blocking access to legal content, applications, services or non-harmful devices; (ii) throttling, impairing or degrading performance based on content, applications, services or non-harmful devices; and (iii) charging more for favorable delivery of content or favoring self-provisioned content over third-party content. The Open Internet Order also prohibited broadband internet access service providers from unreasonably interfering with consumers’ ability to select, access and use the lawful content, applications, services or devices of their choosing as well as edge providers’ ability to make lawful content, applications, services or devices available to consumers.

In January 2018, the FCC released a new order, known as the Restoring Internet Freedom Order, that repealed most of the blocking, throttling, and paid prioritization restrictions adopted in the Open Internet Order. The Restoring Internet Freedom Order reclassified broadband internet access service as a non-common carrier “information service” and repealed rules that had prohibited broadband internet access service providers from: (i) blocking access to legal content, applications, services or non-harmful devices; (ii) throttling, impairing or degrading performance based on content, applications, services or non-harmful devices; and (iii) charging more for favorable delivery of content or favoring self-provisioned content over third-party content. The Restoring Internet Freedom Order continued to require internet service providers to be transparent about their policies and network management practices, and subjected discriminatory practices to case-by-case assessment under antitrust and consumer protection laws. Most portions of the Restoring Internet Freedom Order went into effect on April 23, 2018 and the remainder went into effect on June 11, 2018. Numerous parties have filed judicial challenges to the Restoring Internet Freedom Order, and the litigation has been consolidated in the U.S. Court of Appeals for the District of Columbia Circuit. To the extent the courts or the agencies do not uphold or adopt sufficient safeguards to protect against discriminatory conduct, network operators may seek to extract fees from us or our content publishers to deliver our traffic or otherwise engage in blocking, throttling or other discriminatory practices, and our business could be harmed.

Several states are considering network neutrality legislation or regulation as well. On September 30, 2018, California Governor Jerry Brown signed open internet legislation into law, effective January 1, 2019. The California legislation codifies portions of the FCC's rescinded Open Internet Order. The U.S. Department of Justice filed suit on September 30, 2018 to block implementation of the California law, and the broadband service provider trade associations CTIA, the National Cable & Telecommunications Association, the United States Telecom Association and the American Cable Association, have also sued California to invalidate the state's net neutrality law on grounds that the law is contrary to the supremacy clause of the United States Constitution, among other claims. California has agreed to delay implementation of the law until the litigation is resolved. Meanwhile, at least three additional states (Oregon, Vermont and Washington) have enacted net neutrality legislation, and governors in at least six other states (Hawaii, Montana, New Jersey, New York, Rhode Island and Vermont) have signed executive orders requiring service providers contracting with state agencies to adhere to network neutrality principles. The regulatory framework for network neutrality thus remains unsettled and is subject to ongoing legislative and judicial review.

As we expand internationally, government regulation protecting the non-discriminatory provision of internet access may be nascent or non-existent. In those markets where regulatory safeguards against unreasonable discrimination are nascent or non-existent and where local network operators possess substantial market power, we could experience anti-competitive practices that could impede our growth, cause us to incur additional expenses or otherwise harm our business. Future regulations or changes in laws and regulations or their existing interpretations or applications could also hinder our operational flexibility, raise compliance costs and result in additional liabilities for us, which may harm our business.

Broadband internet providers are subject to government regulation and enforcement actions, and changes in current or future laws, regulations or enforcement actions that negatively impact our distributors or content publishers could harm our business.

Upon the effective date of the FCC's Restoring Internet Freedom Order, the FTC became primarily responsible for regulating broadband privacy and data security in the United States. The FTC follows an enforcement-focused approach to regulating broadband privacy and security. Future FTC enforcement actions could cause us or our content publishers to alter advertising claims or alter or eliminate certain features or functionalities of our products or services which may harm our business. At the FCC, many broadband internet providers provide traditional telecommunications services that are subject to FCC and state rate regulation of intrastate telecommunications services, and are recipients of federal universal service fund payments, which are intended to subsidize telecommunications services in areas that are expensive to serve. Changes in rate regulations or in universal service funding rules, either at the federal or state level, could affect these broadband internet providers' revenue and capital spending plans. In addition, various international regulatory bodies have jurisdiction over non-United States broadband internet providers. The CCPA also applies to broadband internet providers that do business in California. To the extent these broadband internet providers are adversely affected by laws or regulations regarding their business, products or service offerings, our business could be harmed.

Our financial results may be adversely affected by changes in accounting principles applicable to us.

Generally accepted accounting principles in the United States, or U.S. GAAP, are subject to interpretation by the Financial Accounting Standards Board, the FASB, the SEC, and other various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported results of operations and may even affect the reporting of transactions completed before the announcement or effectiveness of a change. For example, we recently adopted *Accounting Standards Codification, Revenue from Contracts with Customers (Topic 606)*, using the modified retrospective method. We applied the new revenue standard to all contracts that were not completed as of January 1, 2018. We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those prior periods. It is difficult to predict the impact of future changes to accounting principles or our accounting policies, any of which could harm our business.

If government regulations or laws relating to the internet, video or other areas of our business change, we may need to alter the manner in which we conduct our business or our business could be harmed.

We are subject to general business regulations and laws, as well as regulations and laws specific to the internet and online services, which may include laws and regulations related to data privacy and security, consumer protection, data localization, law enforcement access to data, encryption, telecommunications, social media, payment processing, taxation, intellectual property, competition, electronic contracts, internet access, net neutrality, advertising, calling and texting, content restrictions, and accessibility, among others. We cannot guarantee that we have been or will be fully compliant in every jurisdiction. Litigation and regulatory proceedings are inherently uncertain, and the laws and regulations governing issues such as data privacy and security, payment processing, taxation, net neutrality, video, telecommunications, e-commerce tariffs and consumer protection related to the internet continue to develop. For example, laws relating to the liability of providers of online services for activities of their users and other third parties have been tested by a number of claims, including actions based on invasion of privacy and other torts, unfair competition, copyright and trademark infringement, and other theories based on the nature and content of the materials searched, the advertisements posted, actions taken or not taken by providers in response to user activity or the content provided by users. Congress has also recently enacted legislation related to liability of providers of online services and may continue to legislate in this area. The recently enacted CCPA also applies to entities that do business in California and imposes a number of new requirements on internet and online services. Moreover, as internet commerce and advertising continues to evolve, increasing regulation by federal, state and foreign regulatory authorities becomes more likely.

As we develop new services and devices, and improve our TV streaming platform, we may also be subject to new laws and regulations specific to such technologies. For example, in developing our Roku TV reference design, we were required to understand, address and comply with an evolving regulatory framework for developing, manufacturing, marketing and selling TVs. If we fail to adequately address or comply with such regulations regarding the manufacture and sale of TVs, we may be subject to fines or sanctions, and our licensees may be unable to sell Roku TVs at all, which would harm our business and our ability to grow our user base.

Laws relating to data privacy and security, data localization, law enforcement access to data, encryption, and similar activities continue to proliferate, often with little harmonization between jurisdictions and little guidance. A number of existing bills are pending in the U.S. Congress and other government bodies that contain provisions that would regulate, for example, how companies can use cookies and other tracking technologies to collect, use and share user information. The CCPA also imposes requirements on certain tracking activity, and we are continuing to assess the impact of the CCPA and proposed amendments to the law on our business. The European Union has already enacted laws requiring advertisers or companies like ours to, for example, obtain informed, and in some cases affirmative or explicit, consent from users for the placement of cookies or other tracking technologies and the delivery of relevant advertisements. If we or the third parties that we work with, such as contract payment processing services, content publishers, vendors or developers violate or are alleged to violate applicable privacy or security laws, industry standards, our contractual obligations, or our policies, such violations and alleged violations may also put our users' information at risk and could in turn harm our business and reputation and subject us to potential liability. Any of these consequences could cause our users, advertisers or publishers to lose trust in us, which could harm our business. Furthermore, any failure on our part to comply with these laws may subject us to liability and reputational harm.

Our use of data to deliver relevant advertising and other services on our platform places us and our content publishers at risk for claims under various unsettled laws, including the Video Privacy Protection Act, or VPPA. Some of our content publishers have been engaged in litigation over alleged violations of the VPPA relating to activities on our platform in connection with advertising provided by unrelated third parties. The Federal Trade Commission has also revised its rules implementing the Children's Online Privacy Protection Act, or COPPA Rules, broadening the applicability of the COPPA Rules, including the types of information that are subject to these regulations, and could limit the information that we or our content publishers and advertisers may collect and use through certain content publishers, the content of advertisements and in relation to certain channel partner content. The CCPA also imposes certain opt in and opt out requirements for certain information about minors. We and our content publishers and advertisers could be at risk for violation or alleged violation of these and other privacy, advertising, or similar laws.

Our actual or perceived failure to adequately protect personal data and confidential information could harm our business.

A variety of state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, disclosure, security, transfer and other processing of personal data. These privacy and data protection-related laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. In addition, each state and the District of Columbia, as well as some foreign nations, have passed laws requiring notification to regulatory authorities and/or to affected users within a specific timeframe when there has been a security breach involving personal data as well as impose additional obligations for companies. For example, the CCPA was signed into law on June 28, 2018 and largely takes effect on January 1, 2020 (and enforcement of some of the provisions will not be immediately active). It imposes additional obligations on companies that process certain information about California residents. Compliance with these laws and regulations can be costly and could delay or impede the development of new products.

As part of our data protection compliance program, we ensure that we have approved data transfer mechanisms in place to provide adequacy for the transfer of personal data from the European Economic Area to the United States.

We will continue to review our business practices and may find it necessary or desirable to make changes to our personal data handling to cause our transfer and receipt of EEA residents' personal data to be legitimized under applicable European law. The regulation of data privacy in the EU continues to evolve, and it is not possible to predict the ultimate effect of evolving data protection regulation and implementation over time. Member states also have some flexibility to supplement the GDPR with their own laws and regulations and may apply stricter requirements for certain data processing activities.

While we have implemented administrative, physical and electronic security measures to protect against reasonably foreseeable loss, misuse and alteration of Gopersonal data and confidential information (e.g., protected content or intellectual property), cyberattacks on companies have increased in frequency and potential impact in recent years and, if successful against us, may harm our reputation and business and subject us to potential liability despite reasonable precautions. As discussed above, we cannot be certain that our chosen security measures will be deemed adequate or reasonable by regulators in all instances.

If we are not able to comply with these laws or regulations or if we become liable under new laws or regulations, we could be directly harmed, and we may be forced to implement new measures to reduce our exposure to this liability. This may require us to expend substantial resources or to suspend or discontinue certain products or services, which may harm our business. In addition, the increased attention focused upon liability issues as a result of lawsuits and legislative proposals could harm our business. Any actual or perceived inability to adequately protect our users' privacy may render our products or services less desirable and could harm our reputation and business. Any costs incurred as a result of this potential liability could harm our business.

If we are found liable for content that we distribute through our platform, our business could be harmed.

As a distributor of content, we face potential liability for negligence, copyright, patent or trademark infringement, public performance royalties or other claims based on the nature and content of materials that we distribute. The Digital Millennium Copyright Act, or the DMCA, is intended, in part, to limit the liability of eligible service providers for caching, hosting or linking to, user content that includes materials that infringe copyrights or other rights. We rely on the protections provided by the DMCA in conducting our business. However, the DMCA and similar statutes and doctrines that we may rely on in the future is subject to uncertain judicial interpretation and regulatory and legislative amendments. Moreover, the DMCA only provides protection primarily in the United States. If the rules around these statutes and doctrines change, if international jurisdictions refuse to apply similar protections or if a court were to disagree with our application of those rules to our business, we could incur liability and our business could be harmed. If we become liable for these types of claims as a result of the content that is streamed over our platform, then our business may suffer. Litigation to defend these claims could be costly and the expenses and damages arising from any liability could harm our business. Our insurance may not be adequate to cover these types of claims or any liability that may be imposed on us.

In addition, we may be adversely impacted if copyright holders assert claims, or commence litigation, alleging copyright infringement against the developers of channels that are distributed on our platform. While our platform policies prohibit streaming content on our platform without distribution rights from the copyright holder, and we maintain processes and systems for the reporting and removal of infringing content, in certain instances our platform has been misused by unaffiliated third parties to unlawfully distribute copyrighted content. For example, we are involved in litigation in Mexico that was commenced in May 2017 by a large Mexican pay TV and internet access provider. We were not named as a defendant in this case, as the case principally targeted entities that are alleged to sell unlicensed content to consumers using our platform, among other means. Involvement in these legal proceedings has been complicated and has drawn management time and company resources. At the commencement of this case, however, a court issued a temporary ban on the importation and sale of Roku devices in Mexico. In October 2018, the ban on sales was lifted by a Federal Court in Mexico; however, the underlying litigation may continue. Our involvement in this litigation caused us to incur legal expenses and other costs and has drawn management time and other company resources away from other matters. Our continuing involvement in this litigation, or similar legal matters in the future, could be disruptive to our business. If content partners or distributors in Latin America or in any other country are influenced by these proceedings and are deterred from working with us to sell players or other products or to maintain their channels or sell advertising on our platform, this could impair our ability to implement our international expansion plans.

Our involvement in any such legal matters now or in the future, could cause us to incur significant legal expenses and other costs, and be disruptive to our business.

Our devices are highly technical and may contain undetected hardware errors or software bugs, which could manifest themselves in ways that could harm our reputation and our business.

Our devices and those of our licensees are highly technical and have contained and may in the future contain undetected software bugs or hardware errors. These bugs and errors can manifest themselves in any number of ways in our devices or our platform, including through diminished performance, security vulnerabilities, data quality in logs or interpretation of data, malfunctions or even permanently disabled devices. Some errors in our devices may only be discovered after a device has been shipped and used by users and may in some cases only be detected under certain circumstances or after extended use. We update our software on a regular basis and, despite our quality assurance processes, we could introduce bugs in the process of updating our software. The introduction of a serious software bug could result in devices becoming permanently disabled. We offer a limited one year warranty in the United States and any such defects discovered in our players after commercial release could result in loss of revenue or delay in revenue recognition, loss of customer goodwill and users and increased service costs, any of which could harm our business, operating results and financial condition. We could also face claims for product or information liability, tort or breach of warranty, or other violations of laws or regulations. In addition, our player contracts with users contain provisions relating to warranty disclaimers and liability limitations, which may not be upheld. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention and adversely affect the market's perception of Roku and our devices. In addition, if our business liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business could be harmed.

Components used in our devices may fail as a result of manufacturing, design or other defects over which we have no control and render our devices permanently inoperable.

We rely on third-party component suppliers to provide certain functionalities needed for the operation and use of our devices. Any errors or defects in such third-party technology could result in errors in our devices that could harm our business. If these components have a manufacturing, design or other defect, they can cause our devices to fail and render them permanently inoperable. For example, the typical means by which our users connect their home networks to our devices is by way of a Wi-Fi access point in the home network router. If the Wi-Fi receiver in our device fails, then our device cannot detect a home network's Wi-Fi access point, and our device will not be able to display or deliver any content to the TV screen. As a result, we may have to replace these devices at our sole cost and expense. Should we have a widespread problem of this kind, our reputation in the market could be adversely affected and our replacement of these devices would harm our business.

If we are unable to obtain necessary or desirable third-party technology licenses, our ability to develop new devices or platform enhancements may be impaired.

We utilize commercially available off-the-shelf technology in the development of our devices and platform. As we continue to introduce new features or improvements to our devices and the Roku platform, we may be required to license additional technologies from third parties. These third-party licenses may be unavailable to us on commercially reasonable terms, if at all. If we are unable to obtain necessary third-party licenses, we may be required to obtain substitute technologies with lower quality or performance standards, or at a greater cost, any of which could harm the competitiveness of our devices, platform and our business.

Our use of open source software could impose limitations on our ability to commercialize our devices and our TV streaming platform.

We incorporate open source software in our TV streaming platform. From time to time, companies that incorporate open source software into their products have faced claims challenging the ownership of open source software and/or compliance with open source license terms. Therefore, we could be subject to suits by parties claiming ownership of what we believe to be open source software or noncompliance with open source licensing terms. Although we monitor our use of open source software, the terms of many open source software licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on the sale of our devices. In such event, we could be required to make our proprietary software generally available to third parties, including competitors, at no cost, to seek licenses from third parties in order to continue offering our devices, to re-engineer our devices or to discontinue the sale of our devices in the event re-engineering cannot be accomplished on a timely basis or at all, any of which could harm our business.

The quality of our customer support is important to our users and licensees, and if we fail to provide adequate levels of customer support we could lose users and licensees, which would harm our business.

Our users and licensees depend on our customer support organization to resolve any issues relating to devices. A high level of support is critical for the successful marketing and sale of devices. We currently outsource our customer support operation to a third-party customer support organization. If we do not effectively train, update and manage our third-party customer support organization to assist our users, and if that support organization does not succeed in helping them quickly resolve issues or provide effective ongoing support, it could adversely affect our ability to sell our devices to users and harm our reputation with potential new users and our licensees.

We will need to improve our operational and financial systems to support our expected growth, increasingly complex business arrangements, and rules governing revenue and expense recognition and any inability to do so could adversely affect our billing services and financial reporting.

We have increasingly complex business arrangements with our content publishers and licensees, and the rules that govern revenue and expense recognition in our business are increasingly complex. To manage the expected growth of our operations and increasing complexity, we will need to improve our operational and financial systems, procedures and controls and continue to increase systems automation to reduce reliance on manual operations. An inability to do so will negatively affect our billing services and financial reporting. Our current and planned systems, procedures and controls may not be adequate to support our complex arrangements and the rules governing revenue and expense recognition for our future operations and expected growth. Delays or problems associated with any improvement or expansion of our operational and financial systems and controls could adversely affect our relationships with our users, content publishers or licensees; cause harm to our reputation and brand; and could also result in errors in our financial and other reporting.

If we are unable to implement and maintain 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 Class A common stock may be adversely affected.

We are required to maintain internal control over financial reporting and to report any material weaknesses in such internal control. Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, requires that we furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting beginning with the year ending December 31, 2018. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. Our independent registered public accounting firm also needs to attest to the effectiveness of our internal control over financial reporting. If we have a material weakness in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. We are in the process of designing and implementing the internal control over financial reporting required to comply with this obligation, which process will be time-consuming, costly and complicated. If we identify material weaknesses in our internal control over financial reporting, are unable to comply with the requirements of Section 404 in a timely manner, are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our Class A common stock could be adversely affected. In addition, we could become subject to investigations by the stock exchange on which our Class A common stock is listed, the Securities and Exchange Commission, or SEC, or other regulatory authorities, which could require additional financial and management resources.

We may pursue acquisitions, which involve a number of risks, and if we are unable to address and resolve these risks successfully, such acquisitions could harm our business.

We may in the future acquire businesses, products or technologies to expand our offerings and capabilities, user base and business. We have evaluated, and expect to continue to evaluate, a wide array of potential strategic transactions; however, we have limited experience completing or integrating acquisitions. Any acquisition could be material to our financial condition and results of operations and could require us to raise capital in the equity markets or issue additional equity and any anticipated benefits from an acquisition may never materialize. In addition, the process of integrating acquired businesses, products or technologies may create unforeseen operating difficulties and expenditures. Acquisitions in international markets would involve additional risks, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries. We may not be able to address these risks successfully, or at all, without incurring significant costs, delays or other operational problems and if we were unable to address such risks successfully our business could be harmed.

We have a credit facility that provides our lender with a first-priority lien against substantially all of our assets and contains financial covenants and other restrictions on our actions that may limit our operational flexibility or otherwise adversely affect our financial condition.

We entered into a credit agreement among us, as borrower, the lenders and issuing banks from time to time party thereto, and Morgan Stanley Senior Funding, Inc., or the Agent providing for a (i) a four-year revolving credit facility in the aggregate principal amount of up to \$75.0 million, or the Revolving Credit Facility, (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$75.0 million, the Term Loan A Facility and (iii) an uncommitted incremental facility subject to certain conditions, collectively, the Credit Agreement. On the Closing Date of the Credit Agreement, we terminated our loan and security agreement with Silicon Valley Bank, except for certain letters of credit, which were cash collateralized by approximately \$26.3 million. The Credit Agreement contains a number of affirmative and negative covenants, which may restrict our current and future operations, particularly our ability to respond to certain changes in our business or industry or take future actions. The Credit Agreement also contains a financial covenant requiring us to maintain a minimum adjusted quick ratio of 1.00 to 1.00, tested as of the last day of any fiscal quarter on the basis of the prior period of our four consecutive fiscal quarters. Pursuant to the Credit Agreement, we granted the Agent a security interest in substantially all of our assets. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Silicon Valley Bank Loan and Security Agreement.”

If we fail to comply with the covenants, make payments as specified in the Credit Agreement, or undergo any other event of default contained in the Credit Agreement, the Agent could declare an event of default, which would give it the right to terminate the commitments to provide additional loans and declare any borrowings outstanding, together with accrued and unpaid interest and fees, to be immediately due and payable. In addition, the Agent would have the right to proceed against the assets we provided as collateral pursuant to the Credit Agreement. If the debt under this credit facility was accelerated, we may not have sufficient cash or be able to sell sufficient assets to repay this debt, which would harm our business and financial condition.

If we fail to comply with the laws and regulations relating to the collection of sales tax and payment of income taxes in the various states in which we do business, we could be exposed to unexpected costs, expenses, penalties and fees as a result of our noncompliance, which could harm our business.

By engaging in business activities in the United States, we become subject to various state laws and regulations, including requirements to collect sales tax from our sales within those states, and the payment of income taxes on revenue generated from activities in those states. The laws and regulations governing the collection of sales tax for sales on our website and payment of income taxes are numerous, complex, and vary from state to state. A successful assertion by one or more states that we were required to collect sales or other taxes or to pay income taxes where we did not could result in substantial tax liabilities, fees and expenses, including substantial interest and penalty charges, which could harm our business.

New legislation that would change U.S. or foreign taxation of international business activities or other tax-reform policies could harm our business.

Reforming the taxation of international businesses has been a priority for U.S. politicians, and key members of the legislative and executive branches have proposed a wide variety of potential changes. Certain changes to U.S. tax laws could affect the tax treatment of our foreign earnings, as well as cash and cash equivalent balances we maintain outside the United States. Additionally, any changes in the U.S. or foreign taxation of such activities may increase our worldwide effective tax rate and the amount of taxes we pay and harm our business.

For example, the Tax Cut and Jobs Act, or TCJA, was enacted on December 22, 2017 and significantly reforms the Internal Revenue Code of 1986. The TCJA, among other things, includes changes to U.S. federal tax rates, imposes additional limitations on the deductibility of interest, has both positive and negative changes to the utilization of future net operating loss carryforwards, allows for the expensing of certain capital expenditures, and puts into effect the migration from a “worldwide” system of taxation to a territorial system. The U.S. Department of Treasury has broad authority to issue regulations and interpretative guidance that may significantly impact how we will apply the law, which could affect our financial position and result of operations.

We may require additional capital to meet our financial obligations and support planned business growth, and this capital might not be available on acceptable terms or at all.

We intend to continue to make significant investments to support planned business growth and may require additional funds to respond to business challenges, including the need to develop new devices and enhance the Roku platform, maintain adequate levels of inventory to support our retail partners’ demand requirements, improve our operating infrastructure or acquire complementary businesses, personnel and technologies. Our primary uses of cash include operating costs such as personnel-related expenses and capital spending. Our future capital requirements may vary materially from those currently planned and will depend on many factors including our growth rate and the continuing market acceptance of our advertising platform, operating system and technology and players along with the timing and effort related to the introduction of new platform features, players, hiring of experienced personnel, the expansion of sales and marketing activities, as well as overall economic conditions. We recently entered into lease agreements for a corporate headquarters, and we will start to incur material expenses in future years, beginning in 2019.

We may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our then existing stockholders could suffer

significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our Class A common stock. Any debt financing we secure could involve additional restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. If we were to violate such restrictive covenants, we could incur penalties, increased expenses and an acceleration of the payment terms of our outstanding debt, which could in turn harm our business.

We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be harmed.

Our facilities are located near known earthquake fault zones, and the occurrence of an earthquake or other natural disaster could cause damage to our facilities and computer systems, which could require us to curtail or cease operations.

Our principal offices and a network operations center are located in the San Francisco Bay Area, an area known for earthquakes, and are thus vulnerable to damage. We are also vulnerable to damage from other types of disasters, including power loss, fire, floods, communications failures and similar events. If any disaster were to occur, our ability to operate our business at our facilities could be impaired.

Risks Related to Ownership of Our Class A Common Stock

The dual class structure of our common stock as contained in our amended and restated certificate of incorporation has the effect of concentrating voting control with those stockholders who held our stock prior to our IPO, including our executive officers, employees and directors and their affiliates, and limiting your ability to influence corporate matters.

Our Class B common stock has 10 votes per share, and our Class A common stock has one vote per share. Our President and Chief Executive Officer, Anthony Wood, holds and controls the vote of a significant number of shares of our outstanding common stock, and therefore will have significant influence over our management and affairs and over all matters requiring stockholder approval, including election of directors and significant corporate transactions, such as a merger or other sale of Roku or our assets, for the foreseeable future. If Mr. Wood's employment with us is terminated, he will continue to have the same influence over matters requiring stockholder approval.

In addition, the holders of Class B common stock collectively will continue to be able to control all matters submitted to our stockholders for approval even if their stock holdings represent less than 50% of the outstanding shares of our common stock. Because of the 10-to-1 voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively will continue to control a majority of the combined voting power of our common stock even when the shares of Class B common stock represent as little as 10% of the combined voting power of all outstanding shares of our Class A and Class B common stock. This concentrated control will limit your ability to influence corporate matters for the foreseeable future, and, as a result, the market price of our Class A common stock could be adversely affected.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, which will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term. If, for example, Mr. Wood retains a significant portion of his holdings of Class B common stock for an extended period of time, he could, in the future, control a majority of the combined voting power of our Class A and Class B common stock. As a board member, Mr. Wood owes a fiduciary duty to our stockholders and must act in good faith in a manner he reasonably believes to be in the best interests of our stockholders. As a stockholder, even a controlling stockholder, Mr. Wood is entitled to vote his shares in his own interests, which may not always be in the interests of our stockholders generally.

The trading price of our Class A common stock has been, and may continue to be, volatile, and the value of our Class A common stock may decline.

The market price of our Class A common stock has been and may continue to be subject to wide fluctuations in response to various factors, including many risk factors listed in this section, and others. Since shares of our Class A common stock were sold in our initial public offering in September 2017 at a price of \$14.00 per share, the reported high and low intraday prices of our Class A common stock have ranged from \$77.57 to \$15.75 through February 15, 2019. The market price of our Class A common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- actual or anticipated fluctuations in our financial condition and operating results;
- changes in projected operational and financial results;
- loss by us of key content publishers;
- changes in laws or regulations applicable to our devices or platform;
- the commencement or conclusion of legal proceedings that involve us;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements of new products or services by us or our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or
- capital-raising activities or commitments;
- additions or departures of key personnel;
- issuance of new or updated research or reports by securities analysts;
- the use by investors or analysts of third-party data regarding our business that may not reflect our financial performance;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- sales of our Class A common stock;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and
- general economic and market conditions.

Furthermore, the stock markets frequently experience extreme price and volume fluctuations that affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, elections, interest rate changes or international currency fluctuations, may negatively impact the market price of our Class A common stock. As a result of such fluctuations, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could harm our business.

Future sales and issuances of our capital stock or rights to purchase capital stock could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to decline.

We may issue additional securities in the future and from time to time. Future sales and issuances of our capital stock or rights to purchase our capital stock could result in substantial dilution to our existing stockholders. We may sell Class A common stock, convertible securities and other equity securities in one or more transactions at prices and in a manner as we may determine from time to time. If we sell any such securities in subsequent transactions, investors may be materially diluted. New investors in such subsequent transactions could gain rights, preferences and privileges senior to those of holders of our Class A common stock.

Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our Class A common stock in the public market, the trading price of our Class A common stock could decline. All of our outstanding shares are eligible for sale in the public market, other than shares and options exercisable held by directors, executive officers and other affiliates that are subject to volume limitations under Rule 144 of the Securities Act. In addition, we have reserved shares for future issuance under our equity incentive plan. Our employees, other service providers, and directors are subject to our quarterly trading window, which generally opens at the start of the second full trading day after the public dissemination of our annual or quarterly financial results and closes (i) with respect to the first, second and third quarter of each fiscal year, at the end of the fifteenth day of the last month of the such quarter and (ii) with respect to the fourth quarter of each fiscal year, at the end of the trading day on the Wednesday before Thanksgiving. These employees, service providers and directors may also sell shares during a closed window periods pursuant to trading plans that comply with the requirements of Rule 10b5-1(c)(1) under the Exchange Act. When these shares are issued and subsequently sold, it would be dilutive to existing stockholders and the trading price of our Class A common stock could decline.

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

A limited number of equity research analysts provide research coverage of our Class A common stock, and we cannot assure you that such equity research analysts will adequately provide research coverage of our Class A common stock. A lack of adequate research coverage may adversely affect the liquidity and market price of our Class A common stock. To the extent we obtain equity research analyst coverage, we will not have any control of the analysts or the content and opinions included in their reports. The price of our Class A common stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts cease coverage of our company, or fail to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

We incur costs and demands upon management as a result of complying with the laws and regulations affecting public companies in the United States, which may harm our business.

As a public company listed in the United States, we incur significant additional legal, accounting and other expenses. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and the Nasdaq Global Select Market, may increase legal and financial compliance costs and make some activities more time consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts, we fail to comply with new laws, regulations and standards, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain certain types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board of Directors, on committees of our Board of Directors or as members of senior management.

We do not intend to pay dividends in the foreseeable future.

We have never declared or paid any cash dividends on our Class A or Class B common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings to grow our business and for general corporate purposes. Moreover, our outstanding loan and security agreements contain prohibitions on the payment of cash dividends on our capital stock. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management or hinder efforts to acquire a controlling interest in us, and the market price of our Class A common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws that may make it difficult for a third-party to acquire, or attempt to acquire, control of Roku, even if a change in control was considered favorable by our stockholders.

Our charter documents also contain other provisions that could have an anti-takeover effect, such as:

- establishing a classified Board of Directors so that not all members of our Board of Directors are elected at one time;
- permitting the Board of Directors to establish the number of directors and fill any vacancies and newly created directorships;
- providing that directors may only be removed for cause;
- prohibiting cumulative voting for directors;
- requiring super-majority voting to amend some provisions in our certificate of incorporation and bylaws;
- authorizing the issuance of “blank check” preferred stock that our Board of Directors could use to implement a stockholder rights plan;
- eliminating the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders; and
- reflecting our two classes of common stock as described above.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibit a person who owns 15% or more of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. Any provision in our certificate of incorporation or our bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our Class A common stock and could also affect the price that some investors are willing to pay for our Class A common stock.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums 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 the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. This exclusive-forum provision, if permitted by applicable law, may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for certain disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find this exclusive-forum provision 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.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Recently, the Delaware Chancery Court issued an opinion invalidating such provision, which is currently on appeal. In light of that recent decision, we will not attempt to enforce this provision of our certificate of incorporation to the extent it is not permitted by applicable law. As a result, we may incur additional costs associated with resolving disputes that would otherwise be restricted by that provision in other jurisdictions, which could harm our business.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

Our corporate headquarters are currently located in Los Gatos, California under a lease that expires in 2020. We use this space for sales, research and development and administrative purposes. In July 2018 and November 2018, we entered into lease agreements to acquire office space in San Jose, California to house our new headquarters. The lease includes multiple buildings and has a term of 140 months from the date we commence occupancy in the first building which is expected to be in 2019. In addition, we maintain offices in Austin, Texas; Cambridge, United Kingdom; Santa Monica, California; Chicago, Illinois; Shanghai, China; Tilst, Denmark and New York, New York. We believe that our facilities are suitable to meet our current needs.

We also lease commercial office space in Saratoga, California through 2020. We have sublet a portion of this space and we are working to sublet the remainder prior to lease expiration.

Item 3. Legal Proceedings

Information with respect to this item may be found in Note 10 to the Consolidated Financial Statements in Item 8, which is incorporated herein by reference.

Item 4. Mine Safety Disclosures

None

PART II

Item 5. Market for Our Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our Class A common stock is listed on The Nasdaq Global Select Market under the ticker symbol “ROKU.” Our Class B common stock is not listed or traded on any exchange.

Holder of Record

As of January 31, 2019, there were 48 stockholders of record of our Class A common stock. This figure does not include a substantially greater number of beneficial holders of our common stock whose shares are held of record by banks, brokers and other financial institutions. As of January 31, 2019, there were approximately 48 stockholders of record of our Class B common stock.

Dividend Policy

We have never declared or paid dividends on our common stock. We intend to retain any future earnings for use in our business and therefore we do not anticipate declaring or paying any cash dividends in the foreseeable future.

Sale of Unregistered Securities and Use of Proceeds

(a) Unregistered Sale of Equity Securities

None.

(b) Use of Proceeds

On September 27, 2017, our registration statement on Form S-1 (No. 333-220318) was declared effective by the SEC for our IPO of Class A common stock. On October 2, 2017, we closed our IPO, in which we issued and sold 10.4 million shares of our Class A common stock at a public offering price of \$14.00 per share, for net proceeds of approximately \$134.8 million, after deducting underwriting discounts and commissions of \$10.1 million. We incurred offering cost of \$3.1 million. No payments for such expenses were made directly or indirectly to (i) any of our officers or directors or their associates, (ii) any persons owning 10% or more of any class of our equity securities, or (iii) any of our affiliates. The offer and sale of all of the shares in the IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (No. 333-220318), which was declared effective by the SEC on September 27, 2018. Following the sale of the shares in connection with the closings of the IPO, the offering terminated.

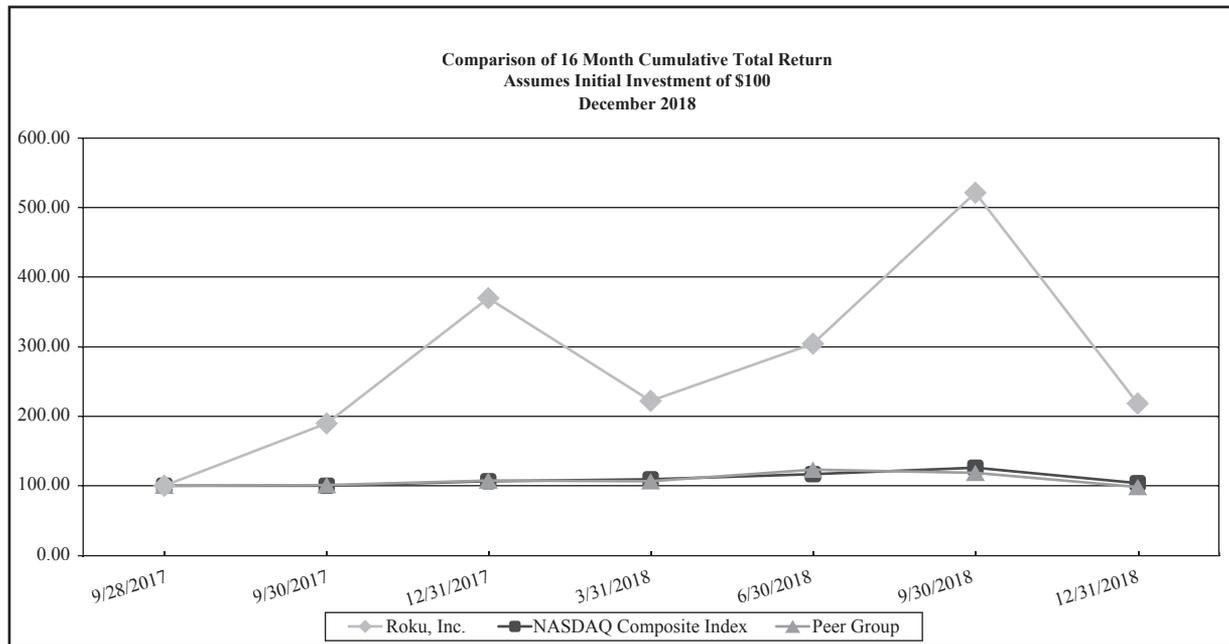
There has been no material change in the planned use of proceeds from our IPO from that described in our prospectus dated September 28, 2018, filed with the SEC pursuant to Rule 424(b) under the Securities Act.

Stock Performance Graphs and Cumulative Total Return

This performance graph shall not be deemed “filed” with the SEC for purposes of Section 18 of the Exchange Act, or incorporated by reference into any filing of Roku, Inc., under the Securities Act.

The following graph shows the cumulative total stockholder return of an investment of \$100 in cash from September 29, 2017 (the date our Class A common stock commenced trading on the Nasdaq) through December 31, 2018, for (i) our Class A common stock, (ii) the Nasdaq Composite Index and (iii) the Peer Group of companies. Because no published index of comparable player and platform companies is currently available, we have used Peer Group of companies for the purposes of this graph in accordance with the requirements of the SEC. The Peer Group is made up of Facebook, Inc., Alphabet, Inc., Logitech International S.A., Netflix, Inc., Snap, Inc., Twitter, Inc., Yelp, Inc. and Zillow Group, Inc. Not all of the companies included in Peer Group participate in all the lines of business in which we are engaged, and some of the companies are engaged in business in which we do not participate. Additionally, the market capitalization of some of the companies included in the Peer Group are different from ours.

Pursuant to applicable SEC rules, all values assume reinvestment of the full amount of all dividends, however no dividends have been declared on our common stock to date. The stockholder return shown on the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.



Company name / Index	9/28/2017	9/30/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018
Roku, Inc.	\$100.00	\$189.57	\$369.86	\$222.15	\$304.42	\$521.64	\$218.84
Nasdaq Composite Index	\$100.00	\$100.66	\$107.25	\$110.03	\$117.30	\$126.00	\$104.21
Peer Group	\$100.00	\$101.01	\$107.39	\$106.80	\$123.54	\$118.94	\$98.33

Equity Compensation Plan Information

The following table summarizes information about our equity compensation plans as of December 31, 2018. All outstanding awards relate to our Class A common stock.

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuances under Equity Compensation Plans (excluding securities in column (a)) (c)
	(in thousands, except per share amount)		
Equity compensation plans approved by security holders ⁽¹⁾	20,057	\$ 8.59	13,239
Equity compensation plans not approved by security holders.....	—	—	—
Total	20,057	\$ 8.59	13,239

- (1) The number of securities remaining available for future issuance in column (c) includes 13,239 shares of Class A common stock authorized and available for issuance under our 2017 Equity Incentive Plan, or 2017 Plan. The number of shares authorized for issuance under the 2017 Plan are subject to an annual increase. Restricted stock units have been excluded for purposes of computing weighted average exercise prices in column (b).

Item 6. Selected Consolidated Financial Data

The selected consolidated financial data below should be read in conjunction with the Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K.

The consolidated statements of operations data for the years ended December 31, 2018, 2017 and 2016, and the consolidated balance sheet data as of December 31, 2018 and 2017 are derived from our audited financial statements appearing in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K. The consolidated statement of operations data for the year ended December 26, 2015 and the consolidated balance sheet data as of December 31, 2016 and December 26, 2015 are derived from audited financial statements not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results that may be expected in any future period.

In 2017, the Company changed the fiscal year-end to match the calendar year-end. Prior to 2017, the Company’s fiscal year was the 52- or 53-week period that ended on the last Saturday of December. Fiscal year 2016 ended on December 31, 2016 and spanned 53 weeks.

	Years Ended December 31,			Year Ended
	2018	2017	2016	December 26, 2015
(in thousands, except per share data)				
Consolidated Statements of Operations Data:				
Net revenue:				
Platform.....	\$ 416,863	\$ 225,356	\$ 104,720	\$ 49,880
Player.....	325,643	287,407	293,929	269,977
Total net revenue.....	<u>742,506</u>	<u>512,763</u>	<u>398,649</u>	<u>319,857</u>
Cost of revenue:				
Platform ⁽¹⁾	120,543	54,826	27,783	8,663
Player ⁽¹⁾	289,815	258,104	249,821	221,416
Total cost of revenue.....	<u>410,358</u>	<u>312,930</u>	<u>277,604</u>	<u>230,079</u>
Gross profit:				
Platform.....	296,320	170,530	76,937	41,217
Player.....	35,828	29,303	44,108	48,561
Total gross profit.....	<u>332,148</u>	<u>199,833</u>	<u>121,045</u>	<u>89,778</u>
Operating expenses:				
Research and development (1).....	170,692	107,945	76,177	50,469
Sales and marketing (1).....	102,780	64,069	52,888	45,153
General and administrative (1).....	71,972	47,435	35,341	31,708
Total operating expenses.....	<u>345,444</u>	<u>219,449</u>	<u>164,406</u>	<u>127,330</u>
Loss from operations.....	<u>(13,296)</u>	<u>(19,616)</u>	<u>(43,361)</u>	<u>(37,552)</u>
Other income (expense), net:				
Interest expense.....	(346)	(1,612)	146	(696)
Loss on extinguishment of debt....	—	(2,338)	—	—
Change in fair value of preferred stock warrant liability.....	—	(40,333)	888	(1,768)
Other income (expense), net.....	4,309	705	(220)	(448)
Loss before income taxes.....	<u>(9,333)</u>	<u>(63,194)</u>	<u>(42,547)</u>	<u>(40,464)</u>
Income tax (benefit) expense.....	<u>(476)</u>	<u>315</u>	<u>211</u>	<u>147</u>
Net loss attributable to common stockholders.....	<u>\$ (8,857)</u>	<u>\$ (63,509)</u>	<u>\$ (42,758)</u>	<u>\$ (40,611)</u>
Net loss per share attributable to common stockholders— basic and diluted (2).....	<u>\$ (0.08)</u>	<u>\$ (2.24)</u>	<u>\$ (9.01)</u>	<u>\$ (10.08)</u>
Weighted-average shares used in computing net loss per share attributable to common stockholders—basic and diluted.....				
	<u>104,618</u>	<u>28,308</u>	<u>4,746</u>	<u>4,030</u>

(1) Stock-based compensation was allocated as follows:

	Years Ended December 31,			Year Ended
	2018	2017	2016	December 26, 2015
(in thousands)				
Cost of platform revenue.....	\$ 97	\$ 81	\$ 224	\$ 54
Cost of player revenue.....	469	145	136	90
Research and development.....	18,538	4,714	2,766	1,685
Sales and marketing.....	10,459	2,817	2,292	1,678
General and administrative.....	8,111	3,196	2,788	1,777
Total stock-based compensation.....	<u>\$ 37,674</u>	<u>\$ 10,953</u>	<u>\$ 8,206</u>	<u>\$ 5,284</u>

- (2) See Note 14 to the Consolidated Financial Statements in Item 8 for an explanation of the calculations of basic and diluted net loss per common share.

	As of December 31,			As of
	2018	2017	2016	December 26, 2015
	(in thousands)			
Consolidated Balance Sheet				
Data:				
Cash and cash equivalents	\$ 155,564	\$ 177,250	\$ 34,562	\$ 75,748
Total assets.....	464,997	371,897	179,078	176,511
Preferred stock warrant liability	—	—	9,990	10,878
Long-term debt, including current portion.....	—	—	15,000	15,000
Total liabilities	220,346	219,618	159,722	123,067
Convertible preferred stock	—	—	213,180	213,180
Total stockholders' equity (deficit)	244,651	152,279	(193,824)	(159,736)

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this document. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed above in the section entitled “Risk Factors.”

Prior to 2017, our fiscal year was the 52- or 53-week period that ended on the last Saturday of December. Our fiscal year 2016 ended on December 31, 2016. Fiscal year 2016 spanned 53 weeks. In 2017, we changed our fiscal year-end to match the calendar year-end.

Overview

Roku pioneered streaming to the TV and we are capitalizing on this economic opportunity as a leading TV streaming platform for users, content publishers and advertisers. Roku connects users to the streaming content they love, enables content publishers to build and monetize large audiences, and provides advertisers with unique capabilities to engage consumers. As of December 31, 2018, we had 27.1 million active accounts, an increase of 40% from the prior year. During the year ended December 31, 2018, our users streamed 24.0 billion hours, an increase of 62% over hours streamed during the year ended December 31, 2017.

Our business model is to grow gross profit by increasing the number of active accounts and increasing our platform monetization by growing hours streamed and our monetization capabilities. We measure our platform monetization progress through average revenue per user, or ARPU, which we believe represents the inherent value of our business. We grow new accounts through three primary ways: we sell streaming players, we partner with TV brands through our Roku TV licensing program, and we have licensing relationships with service operators. The fastest growing source of new accounts comes from our licensing partner relationships and service operators which accounted for 50% of new accounts in 2018, up from 48% in 2017. We believe we have a significant opportunity to continue to grow platform revenue and as we further monetize streaming hours we will increase ARPU. ARPU was \$17.95 for the year ended December 31, 2018 as compared to \$13.78, an increase of 30% for the year ended December 31, 2017.

We generate platform revenue from advertising, content distribution, audience development, billing services and licensing activities on our platform and player revenue from the sale of streaming players. We generated revenue of \$742.5 million during the year ended December 31, 2018, up by 45% as compared to the year ended December 31, 2017. During the year ended December 31, 2018, we generated a gross profit of \$332.1 million, which is up 66% from the year ended December 31, 2017. During the year ended December 31, 2018, our cost of player revenue was lower by \$8.9 million due to the release of accruals of IP licensing obligations that we now believe will not materialize. Excluding this benefit, the gross profit was up 62% for the year ended December 31, 2018 as compared to the year ended December 31, 2017.

We continue to manage the average selling prices, or ASP, of our streaming players to expand our active accounts. As a result, player revenue and gross profit may not increase as rapidly as they have historically or at all. We expect that tradeoffs from player gross profit to grow active accounts will result in increased platform monetization and gross profit.

Key Performance Metrics

We use the following key performance metrics to evaluate our business, measure our performance, develop financial forecasts and make strategic decisions. Our key performance metrics are gross profit, active accounts, hours streamed, and ARPU.

Gross Profit

We measure the performance of our business using gross profit, and we are focused on increasing gross profit. The majority of our gross profit is generated from platform revenue. We believe gross profit is the primary metric to measure the performance of our business, because we have two revenue segments with different margin profiles, and we aim to maximize our high margin platform revenue from our active accounts as they stream content on our platform.

Our gross profit was \$332.1 million, \$199.8 million and \$121.0 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Active Accounts

We define active accounts as the number of distinct user accounts that have streamed content on our platform within the last 30 days of the period. Users that streamed content from The Roku Channel only on non-Roku platforms are not included in this metric. The number of active accounts also does not correspond to the number of unique individuals who actively utilize our platform, or the number of devices associated with an account. For example, a single account may be used by more than one individual, such as a family, and one account may use multiple devices. We believe that the number of active accounts is a relevant measure to gauge the size of our user base and the opportunity to increase our platform revenue and gross profit.

We had 27.1 million, 19.3 million and 13.4 million active accounts at the end of December 31, 2018, 2017 and 2016, respectively.

Hours Streamed

We define hours streamed as the aggregate amount of time our streaming devices stream content on our platform in a given period. Streaming hours on non-Roku platforms are not included in this metric. We report hours streamed on a calendar basis. We believe the number of streaming hours on our platform is an effective measure of user engagement and that the growth in the number of hours of content streamed across our platform reflects our success in addressing the growing user demand for TV streaming. Additionally, we believe increasing user engagement on our streaming platform increases our gross profit because we earn platform revenue from advertising as well as from revenue shares from subscription and transactional video on-demand. However, our revenues from content providers are not tied to the hours streamed on their streaming channels, and the number of hours streamed does not correlate to revenue earned from such content providers or ARPU on a period-by-period basis. Moreover, streaming hours on our platform are measured whenever a Roku player or a Roku TV is streaming content, whether a viewer is actively watching or not. For example, if a Roku player is connected to a TV, and the viewer turns off the TV, steps away or falls asleep and does not stop or pause the player then the particular streaming channel may auto-play subsequent content for a period of time determined by the streaming channel. We believe that this also occurs across a wide variety of non-Roku streaming devices and other set-top boxes.

We streamed 24.0 billion, 14.8 billion and 9.4 billion hours during the years ended December 31, 2018, 2017 and 2016, respectively.

Average Revenue per User

We measure platform monetization progress with average revenue per user, or ARPU. We define ARPU, as our platform revenue during the preceding four quarters divided by the average of the number of active accounts at the end of the current period and the end of the prior four quarters. We measure progress in our platform business using ARPU because it helps us understand the rate at which we are monetizing our active account base.

Our average revenue per user was \$17.95, \$13.78 and \$9.28 at the end of December 31, 2018, 2017 and 2016, respectively.

Factors Affecting Our Performance

Rate of TV streaming and advertising shift to OTT

Consumers have significantly shifted their TV viewing behavior, and we believe all TV content will be available through streaming. Therefore, we also believe this presents a large market opportunity for streaming TV advertising. This is a critical component of our business model because our platform and player revenue, as well as our overall expense structure, is dependent on this shift. In addition, the number of hours streamed on our platform is a critical element of our business because hours determine our advertising inventory and sell through.

User acquisition strategy

We acquire users through three primary ways: we sell streaming players, we partner with TV brands through our Roku TV licensing program, and we have licensing relationships with service operators. We monetize our user base through platform revenue. Player revenue and player gross profit may decrease over time as we strategically aim to acquire new users through the sale of lower priced streaming players.

Ability to monetize users and streaming hours

Our business model is to grow gross profit by increasing the number of active accounts and related streaming hours, and growing revenue through the monetization of our streaming platform. We believe we have a significant opportunity to grow platform revenue as we further monetize users' engagement. Our platform enables content publishers to distribute streaming content through three primary business models, transaction video on demand, or TVOD, that includes channels that offer a la carte movie purchases or rentals, subscription video on demand, or SVOD, that includes subscriptions to individual video on demand channels and so-called virtual multichannel video programming distribution services, and advertising supported video on demand, AVOD, that includes channels that do not charge a subscription fee to users. We generate revenue from TVOD and SVOD channels from various forms of revenue sharing arrangements. Our revenue sharing arrangements generally apply to new subscriptions for accounts that sign up for new services and at the time of a movie rental or purchase for TVOD.

Revenue from the distribution of AVOD channels is generated through the sale of advertising within the channel. AVOD is our fastest growing segment, and we are increasing the monetization of these hours by expanding our advertising capabilities both on and off the Roku platform. We intend to continue to leverage our data and analytics to deliver relevant advertising and improve the ability of our advertisers to optimize their campaigns and measure their results. We also plan to continue to expand our direct sales teams to increase the number of advertisers who use our services.

In late 2017, we launched The Roku Channel, which offers ad-supported free access for users to a collection of films, television series and other content, and at the same time we began a fundamental transition to increase video advertising inventory under our control and to create another way of connecting content publishers with users. The Roku Channel has grown from providing customers with free access to 1,000 movies and TV episodes to roughly 10,000 today and is rapidly becoming one of our leading sources of advertising inventory. In January 2019, we launched Premium Subscriptions within The Roku Channel, through which we resell ad-free premium content subscription services from providers such as Showtime, Starz and Epix directly to our users.

Continued investment in growth

We believe that our future performance will depend on the success of the investments we have made, and will continue to make, to improve the value for users, content publishers and advertisers on our platform. We must regularly update and enrich the Roku platform to meet evolving consumer behavior and deliver a superior user experience. Further, it is important that we remain a frictionless platform for content delivery and invest to provide content publishers with best-in-class publishing tools and actionable audience insights. We must continue to innovate and invest in our advertising capabilities and technology so that we attract and encourage incremental advertising spend on our platform.

Seasonality

We generate significantly higher levels of revenue and gross profit, for both player and platform revenue, in the fourth quarter of the year. Fourth quarter revenue comprised 37% of our total net revenue for the years ended December 31, 2018 and 2017, and fourth quarter gross profit comprised 34% and 37% of our total gross profit for the years ended December 31, 2018 and 2017, respectively.

Components of Results of Operations

Revenue

Platform Revenue

We generate platform revenue from advertising sales, subscription and transaction revenue share, sales of branded channel buttons on remote controls and licensing arrangements with TV brands and service operators. We generate most of our platform revenue in the United States. Our first-party video ad inventory includes native display ads on our home screen and screen saver, as well as ad inventory we obtain through our content publisher agreements. To satisfy existing demand, we can sell video advertising that we purchase from content publishers to supplement our first-party video ad inventory, and to a lesser extent, third-party video advertising on a revenue share basis from content publishers in our Roku Direct Publisher program. Revenue generated from non-Roku platforms is included in platform revenue.

Player Revenue

We generate player revenue from the sale of streaming players through consumer retail distribution channels, including major brick and mortar retailers, such as Best Buy and Walmart, and online retailers, primarily Amazon. We generate most of our player revenue in the United States. In our international markets, we sell our players through wholesale distributors which, in turn, sell to retailers. We currently distribute our players in Canada, the United Kingdom, France, the Republic of Ireland, Mexico and several other Latin American countries.

Cost of Revenue

Cost of Platform Revenue

Cost of platform revenue consists of advertising inventory acquisition costs, payment processing fees, third-party cloud service fees, content licensing fees and allocated personnel-related costs, including salaries, benefits and stock-based compensation for Roku personnel who support platform services, such as advertising and billing operations, customer service, and teams supporting our TV brands and service operator licensees. We anticipate that the cost of platform revenue will increase in absolute dollars.

Cost of Player Revenue

Cost of player revenue is comprised of player manufacturing costs payable to our third-party contract manufacturers, technology licenses or royalty fees, inbound and outbound freight, duty and logistics costs, third-party packaging and assembly costs, provision for excess or obsolete inventory, allocated overhead costs related to facilities and customer support, and salary, benefit and stock-based compensation costs for operations personnel.

Operating and Other Expenses

Research and Development

Research and development expenses consist primarily of personnel-related costs, including employee salaries, benefits and stock-based compensation for our engineers and other employees engaged in the development of our products including new technologies, features and functionality. In addition, research and development expenses include allocated facilities and overhead costs. We believe continued investment is important to attaining our strategic objectives and expect research and development expenses to increase in absolute dollars for the foreseeable future.

Sales and Marketing

Sales and marketing expenses consist primarily of personnel-related costs, including salaries, benefits, commissions and stock-based compensation expense for our employees engaged in sales and sales support, data science and analytics, business development, product management, marketing, communications, and partner and customer support functions. Sales and marketing expenses also include costs for marketing and public relations, channel merchandising, including point of purchase and in-store displays, trade shows and other events, professional services, and allocated facilities and other overhead. We expect our sales and marketing expenses to increase as we continue to grow our business.

General and Administrative

General and administrative expenses consist primarily of personnel-related costs, including salaries, benefits and stock-based compensation for our executive, finance, legal, information technology, human resources and other administrative personnel. We expect our general and administrative expenses to increase due to the anticipated growth of our business and related infrastructure, compliance with global laws and regulations, as well as accounting, legal, insurance, investor relations and other costs associated with being a public company.

Other Income (Expense), Net

Our other income (expense), net, for the year ended December 31, 2018, consists of interest income on short-term investments and foreign currency re-measurement and transaction gains and losses. Other income (expense), net, for the years ended December 31, 2017 and 2016 consisted of changes in the fair value of our convertible preferred stock warrant liability, interest expense on our debt, and foreign currency re-measurement and transaction gains and losses. Prior to our IPO, the underlying shares of our convertible preferred stock warrants were contingently redeemable, and we accounted for these warrants as a liability at fair value and re-measured the fair value at each balance sheet date. Pursuant to our IPO, the convertible preferred stock warrant liability was reclassified to stockholders' equity and re-measurement was no longer required.

Income Tax Expense

Our income tax expense consists primarily of income taxes in certain foreign jurisdictions where we conduct business and state minimum income taxes in the United States. We have a valuation allowance for deferred tax assets, including net operating loss carryforwards and tax credits related primarily to research and development. We expect to maintain this valuation allowance for the foreseeable future.

Results of Operations

The following table sets forth selected consolidated statements of operations data as a percentage of total revenue for each of the periods indicated.

	<u>Years Ended December 31,</u>		
	<u>2018</u>	<u>2017</u>	<u>2016</u>
Net Revenue:			
Platform.....	56%	44%	26%
Player.....	44%	56%	74%
Total net revenue	<u>100%</u>	<u>100%</u>	<u>100%</u>
Cost of Revenue:			
Platform.....	16%	11%	7%
Player.....	39%	50%	63%
Total cost of revenue	<u>55%</u>	<u>61%</u>	<u>70%</u>
Gross Profit:			
Platform.....	40%	33%	19%
Player.....	5%	6%	11%
Total gross profit.....	<u>45%</u>	<u>39%</u>	<u>30%</u>
Operating Expenses:			
Research and development.....	23%	21%	19%
Sales and marketing	14%	13%	13%
General and administrative.....	10%	9%	9%
Total operating expenses	<u>47%</u>	<u>43%</u>	<u>41%</u>
Loss from Operations	<u>(2)%</u>	<u>(4)%</u>	<u>(11)%</u>
Other Income (Expense), Net:			
Interest expense	—%	—%	—%
Loss on extinguishment of debt	—%	(1)%	—%
Change in fair value of preferred stock warrant liability	—%	(8)%	—%
Other income (expense), net.....	1%	—%	—%
Total other income (expense), net	<u>1%</u>	<u>(9)%</u>	<u>—%</u>
Loss before income taxes.....	(1)%	(13)%	(11)%
Income tax (benefit) expense.....	—%	—%	—%
Net loss attributable to common stockholders.....	<u>(1)%</u>	<u>(13)%</u>	<u>(11)%</u>

Comparison of Years Ended December 31, 2018 and 2017

Net Revenue

	Years Ended December 31,		Change \$	Change %
	2018	2017		
<i>(in thousands, except percentages)</i>				
Platform	\$ 416,863	\$ 225,356	\$ 191,507	85%
Player	325,643	287,407	38,236	13%
Total Net Revenue.....	<u>\$ 742,506</u>	<u>\$ 512,763</u>	<u>\$ 229,743</u>	45%

Platform

Platform revenue increased by \$191.5 million or 85% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 and is inclusive of \$25.2 million recognized as a result of the adoption of the new revenue standard. The increase includes \$170.6 million from increases in advertising, subscription and transaction revenue share and the number of paid subscriptions. The revenues from licensing arrangements with service operators and TV brands increased by \$21.2 million mainly driven by the delivery of intellectual property to a licensing partner during the first quarter of 2018.

Player

Player revenue increased by \$38.2 million or 13% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The increase in player revenue was mainly a result of an increase in the volume of players sold mitigated by a reduction in the average selling price of the players. An increase of 19% in the volume of players sold, consisting mainly of our lower priced players, resulted in a 6% decrease in the average selling price of the players. Audio products launched towards the end of the year are included in player revenues and contributed insignificant revenues.

Cost of Revenue

	Years Ended December 31,		Change \$	Change %
	2018	2017		
<i>(in thousands, except percentages)</i>				
Cost of revenue:				
Platform.....	\$ 120,543	\$ 54,826	\$ 65,717	120%
Player.....	289,815	258,104	31,711	12%
Total Cost of Revenue	<u>\$ 410,358</u>	<u>\$ 312,930</u>	<u>\$ 97,428</u>	31%
Gross profit:				
Platform.....	\$ 296,320	\$ 170,530	\$ 125,790	74%
Player.....	35,828	29,303	6,525	22%
Total Gross Profit.....	<u>\$ 332,148</u>	<u>\$ 199,833</u>	<u>\$ 132,315</u>	66%

Platform

The cost of platform revenue increased by \$65.7 million or 120% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Advertising inventory acquisition costs, ad serving costs, content acquisition fees and credit card processing fees increased by \$55.2 million and allocated overhead increased by \$9.4 million during the year ended December 31, 2018. The increase is driven by the growth of our platform business which attracts additional advertisements and monetization opportunities.

Gross profit for platform revenue increased by \$125.8 million or 74% for the year ended December 31, 2018 as compared to the year ended December 31, 2017, primarily driven by growth in our platform revenues. The increase includes \$10.1 million recognized as a result of the adoption of the new revenue standard.

Player

The cost of player revenue increased by \$31.7 million or 12% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The increase in cost of player revenue was primarily the result of approximately \$44.0 million in increased manufacturing and related costs to support the increased volume of players sold, offset by the release of accruals related to IP licensing obligations that did not materialize and management now believes will not materialize in the amount of approximately \$8.9 million and a reduction in freight costs of \$4.6 million. The reduction in freight cost is due to higher costs incurred in the year ended December 31, 2017 to expedite inbound supply to minimize the effect of supply disruption, which did not reoccur in the year ended December 31, 2018.

Gross profit for player revenue increased by \$6.5 million or 22% for the year ended December 31, 2018 as compared to the year ended December 31, 2017 primarily due to the release of accruals related to unrealized IP licensing obligations during the second quarter of 2018 and reduced freight costs.

Operating Expenses

	Years Ended December 31,		Change \$	Change %
	2018	2017		
<i>(in thousands, except percentages)</i>				
Research and development	\$ 170,692	\$ 107,945	\$ 62,747	58%
Sales and marketing	102,780	64,069	38,711	60%
General and administrative	71,972	47,435	24,537	52%
Total Operating Expenses	<u>\$ 345,444</u>	<u>\$ 219,449</u>	<u>\$ 125,995</u>	57%

Research and development

Research and development expenses increased by \$62.7 million or 58% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The increase was primarily due to higher personnel-related costs of \$51.1 million as a result of increased engineering headcount of 36%, higher facilities costs of \$4.1 million and higher platform and product development costs of \$7.6 million that includes expenses such as consulting and outside services, travel and equipment, offset by allocation of overheads.

Sales and marketing

Sales and marketing expenses increased by \$38.7 million or 60% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The increase was primarily due to higher personnel-related costs of \$29.8 million related to increased headcount of 43%, higher facilities costs of \$3.3 million, increases in consulting expenses of \$2.2 million and higher travel and entertainment expenses of \$1.3 million.

General and administrative

General and administrative expenses increased by \$24.5 million or 52% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The increase was primarily due to higher personnel-related costs of \$14.6 million as a result of increased headcount in general and administrative functions of 26%, an increase in consulting and professional service fees of \$9.7 million related to increased accounting and legal services and an increase of \$2.1 million in facilities costs.

Other Income (Expenses), Net

	Years Ended December 31,		Change \$	Change %
	2018	2017		
<i>(in thousands, except percentages)</i>				
Interest expense	\$ (346)	\$ (1,612)	\$ 1,266	(79)%
Loss on extinguishment of debt.....	—	(2,338)	2,338	(100)%
Change in fair value of convertible preferred stock warrants.....	—	(40,333)	40,333	(100)%
Other income (expense), net.....	4,309	705	3,604	511%
Total Other Income (Expense), Net	<u>\$ 3,963</u>	<u>\$ (43,578)</u>	<u>\$ 47,541</u>	(109)%

Other income (expenses), net

Other income (expense), net, changed by \$47.5 million during the year ended December 31, 2018 as compared to the year ended December 31, 2017 primarily due to a charge of \$40.3 million that was recorded during the year ended December 31, 2017 related to the change in the fair value of warrants to purchase convertible preferred stock. No such charge was required during the year ended December 31, 2018 as warrants to purchase convertible preferred stock were converted into warrants to purchase common stock upon our IPO. Other income (expense), net, increased by \$3.6 million during the year ended December 31, 2018 as compared to the year ended December 31, 2017 due to an increase in interest income from a higher cash balance, short-term investments earned in the second half of the year and a one-time cancellation and restocking fee of \$1.4 million from a customer. Interest expense for the year ended December 31, 2017 was higher by \$1.3 million due to outstanding debt during that period. No such debt was outstanding in 2018.

Income Tax (Benefit) Expense

	Years Ended December 31,		Change \$	Change %
	2018	2017		
<i>(in thousands, except percentages)</i>				
Income Tax (Benefit) Expense	\$ (476)	\$ 315	\$ (791)	(251)%

Income tax (benefit) expense

Income tax (benefit) expense is comprised of foreign income tax and state minimum income taxes in the United States.

Comparison of years ended December 31, 2017 and 2016

Net Revenue

	Years Ended December 31,		Change \$	Change %
	2017	2016		
<i>(in thousands, except percentages)</i>				
Platform	\$ 225,356	\$ 104,720	\$ 120,636	115%
Player	287,407	293,929	(6,522)	(2)%
Total Net Revenue.....	<u>\$ 512,763</u>	<u>\$ 398,649</u>	<u>\$ 114,114</u>	29%

Platform

Platform revenue increased by \$120.6 million or 115% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The majority of the increase was driven by our advertising and content and distribution services including subscription and transaction revenue totaling \$119.3 million. This was achieved through expansion of our advertising inventory and an increase in number of paid subscriptions. In addition, there was a \$1.3 million increase in revenues from licensing arrangements.

Player

Player revenue decreased by \$6.5 million or 2% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The decrease was a result of a 22% decrease in the average selling prices while the volume of players sold increased by 25%. The increase in the volume of players and the reduction of average selling prices was mainly driven by the sale of our lower priced Roku Express which was introduced in the fall of 2016 and saw a full year of market share in 2017. An increase in various sales incentives also contributed to the lower average selling prices in the year ended December 31, 2017.

Cost of Revenue

	Years Ended December 31,		Change \$	Change %
	2017	2016		
<i>(in thousands, except percentages)</i>				
Cost of revenue:				
Platform.....	\$ 54,826	\$ 27,783	\$ 27,043	97%
Player.....	258,104	249,821	8,283	3%
Total Cost of Revenue	<u>\$ 312,930</u>	<u>\$ 277,604</u>	<u>\$ 35,326</u>	13%
Gross profit:				
Platform.....	\$ 170,530	\$ 76,937	\$ 93,593	122%
Player.....	29,303	44,108	(14,805)	(34)%
Total Gross Profit.....	<u>\$ 199,833</u>	<u>\$ 121,045</u>	<u>\$ 78,788</u>	65%

Platform

The cost of platform revenue increased by \$27.0 million or 97% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase was due to higher inventory acquisition costs, advertisement serving costs and credit card processing fees totaling \$18.5 million, an increase in allocated overhead of \$3.5 million and an increase in licensing costs of \$0.4 million due to growth in installed base.

Gross profit for platform revenue increased by \$93.6 million or 122% for the year ended December 31, 2017 as compared to the year ended December 31, 2016 due to significant growth in advertising demand and lower associated costs.

Player

The cost of player revenue increased by \$8.3 million or 3% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase was mainly due to an increase of 25% in the volume of players sold partially offset by a reduction in direct manufacturing costs and an increase of \$7.9 million in mostly air freight costs incurred to expedite inbound supply to minimize the effect of component supply disruptions.

Gross profit for player revenue decreased by \$14.8 million or 34% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The decrease is due to lower average selling prices resulting from a combination of the increase in the sales mix of lower priced Roku Express and increases in sales incentives during the year. Gross profit also decreased due to the increase of inbound air freight incurred to expedite inventory supply.

Operating Expenses

	Years Ended December 31,		Change \$	Change %
	2017	2016		
<i>(in thousands, except percentages)</i>				
Research and development	\$ 107,945	\$ 76,177	\$ 31,768	42%
Sales and marketing	64,069	52,888	11,181	21%
General and administrative	47,435	35,341	12,094	34%
Total Operating Expenses	<u>\$ 219,449</u>	<u>\$ 164,406</u>	<u>\$ 55,043</u>	33%

Research and development

Research and development expenses increased by \$31.8 million or 42% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. We incurred higher personnel costs of \$28.0 million as a result of a 42% increase in headcount, higher cost of consulting and outside services of \$3.2 million offset by a decrease in facilities expenses of \$0.5 million.

Sales and marketing

Sales and marketing expenses increased by \$11.2 million or 21% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase is due to higher personnel cost of \$11.6 million as a result of a 54% increase in headcount, higher travel and entertainment expenses of \$0.9 million offset by decrease in allocated overhead by \$2.1 million.

General and administrative

General and administrative expenses increased by \$12.1 million or 34% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase is due to higher personnel cost of \$5.3 million as a result of a 33% increase in headcount, higher cost of consulting and outside services of \$4.0 million and higher travel and entertainment expenses of \$2.9 million.

Other Income (Expenses), Net

	Years Ended December 31,		Change \$
	2017	2016	
<i>(in thousands, except percentages)</i>			
Interest expense	\$ (1,612)	\$ 146	\$ (1,758)
Loss on extinguishment of debt	(2,338)	—	(2,338)
Change in fair value of convertible preferred stock warrants	(40,333)	888	(41,221)
Other income, net	705	(220)	925
Total Other Income (Expense), Net	<u>\$ (43,578)</u>	<u>\$ 814</u>	<u>\$ (44,392)</u>

Other income (expenses), net changed for the year ended December 31, 2017 as compared to the year ended December 31, 2016 mainly due to the increase in the fair value of preferred stock warrants of \$41.2 million. During the year ended December 31, 2017, interest expense increased by \$1.8 million due to a higher amount of debt that was outstanding during the year and \$2.3 million of loss on extinguishment and early payment of debt.

Income Tax Expense

	Years Ended December 31,		Change \$	Change %
	2017	2016		
<i>(in thousands, except percentages)</i>				
Income Tax Expense	\$ 315	\$ 211	\$ 104	49%

Income tax expense is comprised of foreign income tax and state minimum income taxes in the United States.

Liquidity and Capital Resources

As of December 31, 2018, we had cash, cash equivalents and short-term investments of \$197.7 million. In October 2017, as a result of our IPO, we received cash proceeds of \$134.8 million net of underwriting discounts and commissions but before deducting other offering expenses. Our primary source of liquidity is cash generated through operating and financing activities. Our primary uses of cash include operating costs such as personnel-related expenses and capital spending. Our future capital requirements may vary materially from those currently planned and will depend on many factors including our growth rate and the continuing market acceptance of our advertising platform, operating system and technology and players along with the timing and effort related to the introduction of new platform features, players, hiring of experienced personnel, the expansion of sales and marketing activities, as well as overall economic conditions. We recently entered into lease agreements for a corporate headquarters, and we will start to incur material expenses in future years, beginning in 2019. We may also contemplate and engage in additional merger and acquisition activity that could materially impact our liquidity and capital resource position. However, we believe that our existing cash balance and short-term investments together with amounts available under our credit facility will be sufficient to fund our working capital and meet our anticipated cash needs for the next twelve months.

As of December 31, 2018, approximately 2% of our cash was held outside the United States. These amounts were primarily held in Europe and are utilized to fund our foreign subsidiaries. The amount of unremitted earnings related to our foreign subsidiaries is not material.

Senior Secured Term Loan A and Revolving Credit Facilities

On February 19, 2019 (the “Closing Date”), we entered into a credit agreement, by and among us, as borrower, the lenders, or Lenders, and issuing banks from time to time party thereto and Morgan Stanley Senior Funding, Inc., as administrative agent (the “Administrative Agent”) and collateral agent (the “Credit Agreement”). The Credit Agreement provides for (i) a four-year revolving credit facility in the aggregate principal amount of up to \$75,000,000 (the “Revolving Credit Facility”), (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$75,000,000 (the “Term Loan A Facility”) and (iii) an uncommitted incremental facility, subject to the satisfaction of certain financial and other conditions, in the amount of up to (v) \$50,000,000, plus (w) 1.0x of our consolidated EBITDA for the most recently completed four fiscal quarter period, plus (x) an additional amount at our discretion, so long as, on a pro forma basis at the time of incurrence, our secured leverage ratio does not exceed 1.50 to 1.00, plus (y) voluntary prepayments of the Revolving Credit Facility and Term Loan A Facility to the extent accompanied by concurrent reductions to the applicable Credit Facility, plus (z) for up to 90 days after the Closing Date, \$75,000,000 (together with the Revolving Credit Facility and the Term Loan A Facility, collectively, the “Credit Facility”). Borrowings under the Term Loan A Facility may be made by us up to 9 months immediately following the Closing Date (the “Term Loan A Availability Period”). We did not make any borrowings under the Credit Agreement on the Closing Date. Each Lender’s obligation to fund future loans or issue future letters of credit under the Credit Facility is subject to the satisfaction of certain conditions set forth in the Credit Agreement.

On or around the Closing Date, except for certain letters of credit, which were cash collateralized by approximately \$26.3 million, we also repaid all outstanding obligations under our Amended and Restated Loan and Security Agreement, entered into with Silicon Valley Bank on November 18, 2014 (as amended prior to the date hereof, the “SVB Loan Agreement”), and the SVB Loan Agreement was terminated.

Loans under the Credit Facility bear interest at a rate equal to, at our election (i) an alternate base rate, based upon the highest of (x) the prime rate published by the Wall Street Journal, (y) the federal funds effective date plus ½ of 1% and (z) the one-month LIBO rate plus 1.00%, in each case plus an applicable margin of up to 1.00% per annum, with step-downs based on our secured leverage ratio or (ii) an adjusted one-, two-, three-, or six month LIBO rate, at our election, plus an applicable margin of up to 2.00% per annum, with step-downs based on our secured leverage ratio.

Loans under the Term Loan A Facility will amortize in equal quarterly installments beginning on the last day of the fiscal quarter ending after the date of the initial borrowing under the Term Loan A Facility, in an aggregate annual amount equal to (i) on or prior to December 31, 2021, 1.25% of the drawn principal amount of the Term Loan Facility and (ii) thereafter, 2.50% of the drawn principal amount of the Term Loan Facility, with any remaining balance payable on the maturity date of the Term Loan A Facility.

Among other restrictive covenants, the Credit Agreement also contains a covenant requiring us to maintain a minimum adjusted quick ratio of 1.00 to 1.00, tested as of the last day of any fiscal quarter on the basis of the prior period of our four consecutive fiscal quarters.

In June 2017, we entered into a subordinated loan agreement, or 2017 Agreement, with Silicon Valley Bank. On October 31, 2017, we repaid the entire amount outstanding, and subsequently terminated the 2017 Agreement. In connection with the 2017 Agreement we issued warrants to purchase 0.4 million shares of Series H convertible preferred stock, with an exercise price of \$9.17340. The warrants are exercisable up to ten years from the date of issuance. Upon the repayment of the amounts borrowed and the subsequent termination of the 2017 Agreement, we cancelled warrants to purchase 0.1 million shares of Class B common stock that were contingent on future borrowings. The remaining warrants were exercised during the year ended December 31, 2017 and during the three months ended March 31, 2018. There were no warrants outstanding as of December 31, 2018.

Cash Flows

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

	Years Ended December 31,		
	2018	2017	2016
Consolidated Statements of Cash Flows Data:			
Cash flows provided by (used in) operating activities.....	\$ 13,922	\$ 37,292	\$ (32,463)
Cash flows used in investing activities.....	(60,133)	(12,268)	(8,567)
Cash flows provided by (used in) financing activities.....	24,525	117,664	(156)

Cash Flows from Operating Activities

Our operating activities generated \$13.9 million in cash for the year ended December 31, 2018. Our net loss of \$8.9 million for the year ended December 31, 2018 was adjusted by non-cash charges of \$48.4 million comprising mainly of \$8.4 million of depreciation and amortization, \$37.7 million of stock-based compensation, \$1.1 million relating to loss incurred on exiting facilities and \$0.9 million of provision related to doubtful accounts. The changes in our operating assets and liabilities used cash of \$25.6 million comprising of outflows of \$50.7 million from increase in accounts receivable due to increased seasonal revenues in the fourth quarter, \$3.0 million from increasing inventory levels and \$1.1 million from decrease in other long-term liabilities. These outflows were offset by cash inflows of \$17.9 million from increase in accrued liabilities, \$10.1 million from increase in deferred revenue and \$2.3 million from decrease in deferred cost of revenue.

During the year ended December 31, 2017, operating activities generated \$37.3 million in cash as a result of net loss of \$63.5 million, adjusted by non-cash charges of \$60.4 million and increase of \$39.5 million in our net operating assets and liabilities. The non-cash charges comprise mainly of \$40.3 million of change in fair value of preferred stock warrants, \$11.0 million of stock-based compensation, \$5.3 million of depreciation and amortization, \$2.3 million of loss from extinguishment of debt and \$0.5 million of loss relating to exit from our prior headquarter facilities. The increase in operating assets and liabilities was the result of increase in accounts payable and accrued liabilities of \$48.4 million due to both the growth in business and the timing of payments, increase in deferred revenue balances of \$30.0 million, decrease in inventories of \$10.8 million, and increase in other long-term liabilities by \$3.6 million. These increases were offset by increases in accounts receivable of \$41.2 million as a result of growth in our business, an increase in prepaid and other current assets of \$6.5 million and an increase in other non-current assets of \$2.8 million.

During the year ended December 31, 2016, operating activities used \$32.5 million in cash as a result of a net loss of \$42.8 million, adjusted by non-cash charges of \$17.8 million and a decrease of \$7.5 million in our net operating assets and liabilities. The non-cash charges of \$17.8 million were primarily comprised of \$8.2 million of stock-based compensation expenses, \$5.3 million of depreciation and amortization expense and a \$3.8 million loss provision related to the exit from our prior headquarter facilities. The decrease from our net operating assets and liabilities was primarily the result of a \$13.3 million increase in inventory for anticipated sales of players, a \$26.4 million increase in accounts receivable as a result of increases in sales of our players and platform arrangements and a \$2.9 million increase in deferred cost of revenue. The decrease in our net operating assets and liabilities was partially offset by a \$15.0 million increase in accounts payable and accrued liabilities due to the timing of payments and a \$19.8 million increase in deferred revenue as a result of the growth in our business.

Cash Flow from Investing Activities

Our investing activities for the year ended December 31, 2018 included cash outflow of \$18.3 million spent on purchase of property and equipment including expenditure on leasehold improvements related to expanding our facilities and other capital investments and \$53.8 million spent on the purchase of short-term investments, partially offset by \$12.0 million received from sales/maturities of short-term investments.

During the year ended December 31, 2017, investing activities used \$12.3 million in cash mainly on capital expenditures related to purchase of property, equipment and leasehold improvements of \$9.2 million and acquisition of a business of \$3.0 million.

During the year ended December 31, 2016, investing activities used \$8.6 million primarily on capital expenditures to purchase property and equipment and leasehold improvements related to expanding our facilities.

Cash Flow from Financing Activities

Our financing activities provided cash of \$24.5 million for the year ended December 31, 2018. The cash was generated mainly from the exercise of employee stock options amounting to \$25.0 million partially offset by a payment of \$0.5 million in connection with a previous business acquisition.

During the year ended December 31, 2017, financing activities provided \$117.7 million in cash primarily from the sale of shares in our IPO net of issuance cost of \$131.6 million, proceeds from exercise of stock options of \$1.8 million offset by net repayment of debt of \$15.8 million.

During the year ended December 31, 2016, financing activities used \$0.2 million in cash from \$0.4 million in proceeds from stock option exercises, less \$0.6 million in IPO costs paid during the period.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements during the years ended December 31, 2018, 2017 and 2016.

Contractual Obligations

Our future minimum payments under our non-cancelable contractual obligations were as follows as of December 31, 2018 (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1 – 3 Years	3 – 5 Years	More Than 5 Years
Purchase commitments (1).....	\$ 40,584	\$ 40,584	\$ —	\$ —	\$ —
Operating lease obligations (2)	367,705	16,817	61,158	66,258	223,472
Other obligations (3)	4,706	3,732	974		
Total	<u>\$ 412,995</u>	<u>\$ 61,133</u>	<u>\$ 62,132</u>	<u>\$ 66,258</u>	<u>\$ 223,472</u>

- (1) Represents commitments to purchase finished goods from our contract manufacturers and other inventory related items.
- (2) Represents future minimum lease payments under non-cancelable operating leases.
- (3) Represents commitments included in other non-cancelable arrangements such as ad buys and other platform services.

We currently rely on contract manufacturers to produce, assemble and test our products. Consistent with industry practices, we acquire product through a combination of purchase orders, supplier contracts, and open orders based on projected demand information. Contract manufacturers acquire components and build products based on projected demand forecasts. If there are unexpected changes to anticipated demand for our products or in the sales mix of our products, some of the firm, non-cancelable, and unconditional purchase commitments may result in our being committed to purchase excess inventory.

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.

As we are unable to reasonably predict the timing of settlement of liabilities related to unrecognized tax benefits, net, the table does not include \$14.5 million of such non-current liabilities included in other liabilities on our consolidated balance sheet as of December 31, 2018.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with generally accepted accounting principles in the United States. 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. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience, current trends and other factors that we believe to be reasonable at the time our consolidated financial statements are prepared. Our actual results could differ from these estimates.

The critical accounting policies requiring estimates, assumptions and judgments that we believe have the most significant impact on our financial statements are described below.

Revenue Recognition

We derive revenue primarily from platform services and sales of our players. We adopted ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606), (the “new revenue standard”) on January 1, 2018, using the modified retrospective method. The new revenue standard was applied to all contracts that were not completed as of January 1, 2018. We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information is not restated and continues to be reported under the accounting standards in effect for those prior periods.

We enter into contracts that may include various combinations of products and services, which are generally capable of being distinct and are accounted for as separate performance obligations.

Revenue is recognized when control of promised products or services is transferred to customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those products or services. We consider the following approach to recognize revenue.

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, performance obligations are satisfied.

Shipping charges billed to customers are included in revenue and the related shipping costs are included in cost of revenue. We record revenue net of taxes collected or accrued. Sales taxes are recorded as current liabilities until remitted to the relevant government authority. We do not have any capitalized costs associated with contract acquisition because most direct contract acquisition costs relate to contracts that are recognized over a period of one year or less.

Our contracts contain multiple distinct performance obligations. The computed transaction price of each contract is allocated to each performance obligation based on a relative stand-alone selling price, or SSP. For performance obligations routinely sold separately, the SSP is determined by evaluating such stand-alone sales. For those performance obligations that are not routinely sold separately, we determine SSP based on a market assessment approach, or on an expected cost-plus margin approach.

Our revenue is generated from the following two segments:

Platform segment:

Our platform segment generates revenue from advertising sales and content distribution and audience development activities like revenue shares from subscription and transaction based content, sale of branded channel buttons on remote controls and licensing arrangements with TV brands and service operators.

Our advertising revenue is mostly generated through video and display advertising delivered through advertising impressions. We enter into advertising arrangements directly with the advertiser or with their agency which purchases advertising on their behalf. Advertising is typically sold on a cost-per-thousand basis as evidenced by an Insertion Order, or IO, that specifies the terms of the arrangement including the type of ad product, pricing, insertion dates, and the number of impressions over a stated period. Revenue is recognized as the number of impressions are delivered. IOs may include multiple performance obligations as they contain distinct advertising products or services. For such arrangements, we allocate revenue to each performance obligation based on their relative SSPs. In addition, advertising revenue is also recognized from distinct performance obligations included in distribution arrangements with content publishers.

Within content distribution and audience development, we earn revenue shares from content publishers based on user subscriptions activated or billed through our platform and from purchases or rental of publishers' media. Our revenue share is generally equal to a fixed percentage of the price charged by the content publisher or a contractual flat fee.

We sell a branded channel buttons on player and TV remote controls that provide one-touch access to a publishers' content. The Company typically receives a fixed fee per button for each player or TV unit sold over a defined distribution period.

We license our technology and proprietary operating system to TV brands and service operators. Arrangements with TV brands commonly include a license to the Company's technology and proprietary operating system over a specified term including updates and upgrades. Licensing revenues from TV brands are generated on a flat fee basis or from per unit licensing fees. Arrangements may also include marketing development funds paid to TV brands. Marketing development funds are reflected as a reduction to the estimated transaction price.

To the extent, platform services are part of multiple element arrangement, revenue recognition of each performance obligation in the estimated transaction price of a contract is based on the expected value for which a significant reversal of revenue is not expected to occur. The estimate of the variable consideration is based on the assessment of historical, current, and forecasted performance noted and expected from the performance obligation.

Player segment:

We sell majority of our players through retail distribution channels, including brick and mortar and online retailers, and through our website. Our player revenue includes allowances for returns and sales incentives in the estimated transaction price. The estimates for returns and sales incentives are based on historical experience and anticipated performance.

Our player segment has two performance obligations. The hardware and embedded software are considered as one performance obligation and we recognize revenue at a point in time when control has transferred to the customer, which is based on the contractual terms. Our unspecified upgrades or enhancements are available to customers on a when-and-if available basis. We record the allocated value of the unspecified upgrades as deferred revenue and recognize it as player revenue ratably on a time elapsed basis, by day, over the estimated economic life of the associated players.

The adoption of the new revenue standard results in contract balances such as accounts receivable, contract assets and contract liabilities or deferred revenues. Contract assets are created when the timing of revenue recognition differs from the timing of invoicing to a customer. Contract assets primarily relate to our conditional right to consideration for work completed but not billed. Contract assets are transferred to accounts receivable when the rights become unconditional and the customer is invoiced. Our contract assets are current in nature and are included in "Prepaid expenses and other current assets". Contract liabilities are recorded as deferred revenue and primarily relate to the advance consideration received from customers.

Valuation of Inventory

We value inventory at the lower of cost or market with cost determined on a first-in, first-out basis. We base write-downs of inventories upon current facts and circumstances. We perform a detailed assessment of excess and obsolete inventory at each balance sheet date, which includes a review of, among other factors, demand requirements and market conditions. Based on this analysis, we record adjustments, when appropriate, to reflect inventory of finished products, materials on hand and purchase commitments at lower of cost or market which is based on net realizable value. We establish a reserve for players or materials which are not forecasted to be consumed. Although we try to ensure the accuracy of our forecasts of player demand and pricing assumptions, any significant unanticipated changes in demand, pricing or technological developments could significantly impact the value of our inventory and our reported operating results. If we find that our supply estimates exceed our inventory demands, our inventory is written-down and charged to cost of revenue at the time of such determination. Conversely, if assumptions or circumstances beyond our control change and we subsequently sell players that have previously been written-down, our gross margin in the period of sale will be favorably impacted. The inventory provisions recorded are net of the reversals of provisions for sales of previously written-down inventory for each period presented.

Allowances for Returns, Sales Incentives and Doubtful Accounts

Accounts receivable are stated at invoice value less estimated allowances for returns, customer incentives and doubtful accounts. To determine the allowances for returns, sales incentives and doubtful accounts, we perform an ongoing analysis of various factors including our historical experience, recent write-offs and specific analysis of significant receivables that are past due. If our estimates regarding accounts receivable allowances differ from the actual results, the losses or gains, could be material.

Stock-Based Compensation

Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as an expense on a straight-line basis over the requisite service period, which is generally the vesting period of the respective award. Determining the fair value of stock-based awards at the grant date requires judgment.

We use the Black-Scholes option-pricing model to determine the fair value of stock options. The determination of the grant date fair value of options using an option-pricing model is affected by our estimated common stock fair value as well as assumptions regarding a number of other complex and subjective variables. These variables include our expected stock price volatility over the expected term of the options, stock option exercise and cancellation behaviors, risk-free interest rates and expected dividends, which are estimated as follows:

- *Fair Value of Our Common Stock.* Prior to our IPO, the fair value of the common stock underlying our stock options was determined by our Board of Directors. The valuations of our common stock were determined in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Our Board of Directors, with input from management, exercised significant judgment

and considered numerous objective and subjective factors to determine the fair value of our common stock at each grant date, including but not limited to the prices, rights, preferences and privileges of our preferred stock relative to the common stock, our operating and financial performance, current business conditions and projections, our stage of development, likelihood of achieving a liquidity event for the shares of common stock underlying these stock options, such as an IPO or sale of our company, given prevailing market conditions, any adjustment necessary to recognize a lack of marketability of the common stock underlying the granted options, the market performance of comparable publicly-traded companies, the U.S. and global capital market conditions.

Subsequent to our IPO, we use the market closing price for our Class A common stock as reported on The Nasdaq Global Select Market on the date of grant.

- *Expected Term.* The expected term of employee stock options represents the weighted-average period that the stock options are expected to remain outstanding. To determine the expected term, we generally apply the simplified approach in which the expected term of an award is presumed to be the mid-point between the vesting date and the expiration date of the award as we do not have sufficient historical exercise data to provide a reasonable basis for an estimate of expected term.
- *Volatility.* As we do not have sufficient trading history for our Class A common stock, the expected volatility for our Class A common stock is estimated by taking the average historic price volatility for industry peers based on daily price observations over a period equivalent to the expected term of the stock option awards. Industry peers consist of several public companies in our industry which are either similar in size, stage of life cycle or financial leverage. We intend to consistently apply this process until a sufficient amount of historical information regarding the volatility of our own Class A common stock share price becomes available or unless circumstances change such that the identified peer companies are no longer similar to us, in which case, more suitable companies whose share prices are available would be utilized in the calculation.
- *Risk-free Rate.* The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected term for each of our option awards.
- *Dividend Yield.* We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we use an expected dividend yield of zero.

In addition to the assumptions used in the Black-Scholes option pricing model, we also estimated a forfeiture rate to calculate the stock-based compensation expense for our awards prior to January 1, 2017. Beginning January 1, 2017, we recognize forfeitures as they occur.

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

We account for the fair value of the restricted stock units using the closing market price of our Class A common stock on the date of the grant.

We will continue to use judgement in evaluating assumptions related to our stock-based compensation cost. As we continue to accumulate additional data related to our common stock and our business evolves, we may have refinements to our assumptions and estimates which could impact our future stock-based compensation cost.

Provision for Income Taxes

We account for income taxes in accordance with authoritative guidance, which requires the use of the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based upon the difference between the consolidated financial statement carrying amounts and the tax basis of assets and liabilities and are measured using the enacted tax rate expected to apply to taxable income in the years in which the differences are expected to be reversed.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation

allowance is provided when it is more likely than not that the deferred tax assets will not be realized. We have established a full valuation allowance to offset domestic net deferred tax assets due to the uncertainty of realizing future tax benefits from our net operating loss carry-forwards and other deferred tax assets. Our valuation allowance is attributable to the uncertainty of realizing future tax benefits from U.S. net operating losses and other deferred tax assets.

Recent Accounting Pronouncements

On January 1, 2018, the Company adopted guidance in ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, or new revenue standard, using the modified retrospective method. The Company applied the new revenue standard to all contracts that were not completed as of January 1, 2018. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. Comparative information for prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods. Refer to Note 3 in Item 8 of this report for the detail on the impact of adoption.

On January 1, 2018, the Company adopted guidance in ASU 2016-16, *Income taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)*, using the modified retrospective method. The new guidance allows a reporting entity to recognize the tax expense from the sale of the asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. The adoption of this guidance resulted in a decrease in prepaid expense and other current assets and an increase to the accumulated deficit in amounts that were not material.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, related to new accounting and reporting guidelines for leasing arrangements. The guidance requires recognition of right-to-use lease assets and lease liabilities for all leases (with the exception of short-term leases) on the balance sheet of lessees. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company will adopt this guidance on January 1, 2019 using the optional transition method and will not restate comparative periods. The Company expects adoption of the standard will result in the recognition of lease liabilities for operating leases of approximately \$40-\$50 million and right-of-use assets of approximately \$35-\$45 million at January 1, 2019, with no material impact to its consolidated statements of operations.

In January 2017, the FASB issued ASU 2017-04, *Intangibles—Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment*, which eliminates Step 2 from the goodwill impairment test which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. Under this guidance, an entity should perform its annual or interim goodwill impairment test by comparing the fair value of the reporting unit with its carrying amount and should recognize an impairment loss for the amount by which the carrying amount exceeds the reporting unit's fair value, with the loss not exceeding the total amount of goodwill allocated to that reporting unit. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2019, with early adoption permitted. The guidance is to be applied prospectively. The Company does not believe the adoption of ASU 2018-15 will have a material impact on the consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Topic 350), Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which requires hosting arrangements that are service contracts to follow the guidance for internal-use software to determine which implementation costs can be capitalized. The guidance is effective either prospectively or retrospectively for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted. The Company is evaluating the impact of this new guidance on the consolidated financial statements and the related disclosures.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurements (Topic 820), Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. This standard removes, modifies, and adds certain disclosure requirements for fair value measurements. This pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. The Company is currently in the process of evaluating the effects of the new guidance but does not expect the impact from this standard to be material.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Fluctuation Risk

Our investment objective is to conserve capital and maintain liquidity to support our operations. Our short-term investments include commercial paper, U.S. government securities, and corporate bonds. Such instruments carry a certain degree of interest rate risk. However, due to the short-term nature of our investment portfolio, we do not believe an immediate 10% increase or decrease in interest rates would have a material effect on the fair market value of our portfolio. Therefore, we do not expect our operating results or cash flows to be materially affected by a sudden change in interest rates.

Foreign Currency Exchange Rate Risk

Most of our sales are currently within the United States and we have minimal foreign currency risk related to our revenue. In addition, most of our operating expenses are denominated in the U.S. dollar, resulting in minimal foreign currency risks. In the future, if our international sales increase or more of our expenses are denominated in currencies other than the U.S. dollar, our exposure to foreign currency risk will likely be more significant. For any of the periods presented, we did not enter into any foreign exchange contracts. However, in the future, we may enter into derivatives or other financial instruments in an attempt to hedge our foreign currency exchange risk.

Item 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Roku, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Roku, Inc. and subsidiaries (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), 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 and our report dated March 1, 2019, expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 3 to the financial statements, effective January 1, 2018, the Company has changed its method of accounting for revenue due to adoption of Accounting Standards Codification Topic 606 (ASU No. 2014-09), *Revenue from Contracts with Customers*, and all subsequent amendments (collectively, "ASC 606"). The Company adopted ASC 606 using the modified retrospective approach.

Basis for Opinion

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

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

/s/ DELOITTE & TOUCHE LLP

San Jose, California

March 1, 2019

We have served as the Company's auditor since 2008.

ROKU, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value)

	As of December 31,	
	2018	2017
Assets		
Current Assets:		
Cash and cash equivalents	\$ 155,564	\$ 177,250
Short-term investments	42,146	—
Accounts receivable, net of allowances of \$21,897 and \$17,739 as of	183,078	120,553
December 31, 2018 and 2017, respectively		
Inventories	35,585	32,740
Prepaid expenses and other current assets	15,374	11,367
Deferred cost of revenue, current portion	1,188	3,007
Total current assets	432,935	344,917
Property and equipment, net	25,264	14,736
Deferred cost of revenue, non-current portion	—	5,403
Intangible assets, net	1,477	2,030
Goodwill	1,382	1,382
Other non-current assets	3,939	3,429
Total Assets	\$ 464,997	\$ 371,897
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 56,576	\$ 56,413
Accrued liabilities	91,986	72,344
Deferred revenue, current portion	45,442	34,501
Total current liabilities	194,004	163,258
Deferred revenue, non-current portion	19,594	48,511
Other long-term liabilities	6,748	7,849
Total Liabilities	220,346	219,618
Commitments and contingencies (Note 10)		
Stockholders' Equity:		
Preferred stock, \$0.0001 par value;	—	—
10,000 shares authorized as of December 31, 2018 and 2017; no shares issued and outstanding as of December 31, 2018 and 2017		
Common stock, \$0.0001 par value;	11	10
1,150,000 (Class A - 1,000,000 and Class B - 150,000) shares authorized as of December 31, 2018 and 2017; 109,770 (Class A - 77,820 and Class B - 31,950) shares and 99,157 (Class A - 19,325 and Class B - 79,832) shares issued and outstanding as of December 31, 2018 and 2017, respectively		
Additional paid-in capital	498,553	435,607
Accumulated other comprehensive loss	(17)	—
Accumulated deficit	(253,896)	(283,338)
Total stockholders' equity	244,651	152,279
Total Liabilities and Stockholders' Equity	\$ 464,997	\$ 371,897

See accompanying Notes to Consolidated Financial Statements.

ROKU, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years Ended December 31,		
	2018	2017	2016
Net Revenue:			
Platform	\$ 416,863	\$ 225,356	\$ 104,720
Player	325,643	287,407	293,929
Total net revenue (Note 3)	<u>742,506</u>	<u>512,763</u>	<u>398,649</u>
Cost of Revenue:			
Platform	120,543	54,826	27,783
Player	289,815	258,104	249,821
Total cost of revenue	<u>410,358</u>	<u>312,930</u>	<u>277,604</u>
Gross Profit:			
Platform	296,320	170,530	76,937
Player	35,828	29,303	44,108
Total gross profit	<u>332,148</u>	<u>199,833</u>	<u>121,045</u>
Operating Expenses:			
Research and development	170,692	107,945	76,177
Sales and marketing	102,780	64,069	52,888
General and administrative	71,972	47,435	35,341
Total operating expenses	<u>345,444</u>	<u>219,449</u>	<u>164,406</u>
Loss from Operations	<u>(13,296)</u>	<u>(19,616)</u>	<u>(43,361)</u>
Other Income (Expense), Net:			
Interest expense	(346)	(1,612)	146
Loss on extinguishment of debt	—	(2,338)	—
Change in fair value of preferred stock warrant liability	—	(40,333)	888
Other income (expense), net	4,309	705	(220)
Total other income (expense), net	<u>3,963</u>	<u>(43,578)</u>	<u>814</u>
Loss Before Income Taxes	(9,333)	(63,194)	(42,547)
Income tax (benefit) expense	(476)	315	211
Net Loss Attributable to Common Stockholders	<u>\$ (8,857)</u>	<u>\$ (63,509)</u>	<u>\$ (42,758)</u>
Net loss per share attributable to common stockholders—basic and diluted	<u>\$ (0.08)</u>	<u>\$ (2.24)</u>	<u>\$ (9.01)</u>
Weighted-average shares used in computing net loss per share attributable to common stockholders—basic and diluted	<u>104,618</u>	<u>28,308</u>	<u>4,746</u>

See accompanying Notes to Consolidated Financial Statements.

ROKU, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Years Ended December 31,		
	2018	2017	2016
Net Loss Attributable to Common Stockholders.....	\$ (8,857)	\$ (63,509)	\$ (42,758)
Other comprehensive loss, net of tax:			
Unrealized loss on short-term investments, net of tax.....	(17)	—	—
Comprehensive Net Loss.....	\$ (8,874)	\$ (63,509)	\$ (42,758)

See accompanying Notes to Consolidated Financial Statements

ROKU, INC.
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount					
Balance—December 26, 2015	80,844	\$ 213,180	4,531	\$ —	\$ 17,335	\$ —	\$ —	\$ (177,071)	\$ (159,736)
Issuance of common stock upon exercise of warrants	—	—	162	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	126	—	438	—	—	—	438
Vesting of early exercised stock options	—	—	—	—	26	—	—	—	26
Stock-based compensation expense	—	—	—	—	8,206	—	—	(42,758)	8,206
Net loss	—	—	—	—	—	—	—	(219,829)	(42,758)
Balance—December 31, 2016	80,844	213,180	4,819	—	26,005	—	—	(219,829)	(193,824)
Issuance of common stock upon exercise of stock options	—	—	963	1	2,086	—	—	—	2,087
Share repurchases	—	—	(92)	—	—	(671)	—	—	(671)
Vesting of early exercised stock options	—	—	—	—	62	—	—	—	62
Stock-based compensation expense	—	—	—	—	10,953	—	—	—	10,953
Issuance of common stock pursuant to an acquisition	—	—	108	—	—	—	—	—	—
Issuance of common stock upon exercise of common and preferred warrants	—	—	2,165	—	—	—	—	—	—
Issuance of common stock pursuant to an initial public offering, net of issuance costs of \$3.1 million	—	—	10,350	1	131,645	—	—	—	131,646
Conversion of preferred stock into common stock pursuant to an initial public offering	(80,844)	(213,180)	80,844	8	213,172	—	—	—	213,180
Reclassification of preferred stock warrants liability to additional paid-in-capital upon conversion to common stock warrants	—	—	—	—	52,355	—	—	(63,509)	52,355
Net loss	—	—	—	—	—	—	—	—	(63,509)
Balance—December 31, 2017	—	—	99,157	10	436,278	(671)	—	(283,338)	152,279
Vesting of early exercised stock options	—	—	—	—	239	—	—	—	239
Issuance of common stock pursuant to equity incentive plans, net of taxes	—	—	10,481	1	25,033	—	—	—	25,034
Issuance of common stock pursuant to exercise of common stock warrants, net	—	—	141	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	37,674	—	—	—	37,674
Share repurchases	—	—	(9)	—	—	—	—	—	—
Adoption of ASU 2016-16 (Note 2)	—	—	—	—	—	—	—	(40)	(40)
Adoption of ASU 2014-09 (Note 3)	—	—	—	—	—	—	—	38,339	38,339
Unrealized loss on short-term investments	—	—	—	—	—	—	(17)	—	(17)
Net loss	—	—	—	—	—	—	—	(8,857)	(8,857)
Balance—December 31, 2018	—	—	109,770	11	499,224	(671)	—	(253,896)	244,651

See accompanying Notes to Consolidated Financial Statements.

ROKU, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net loss.....	\$ (8,857)	\$ (63,509)	\$ (42,758)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	8,389	5,336	5,302
Stock-based compensation expense	37,674	10,953	8,206
Provision for doubtful accounts	876	104	336
Change in fair value of preferred stock warrant liability	—	40,333	(888)
Noncash interest expense	342	784	115
Loss from exit of facilities	1,120	525	3,804
Loss on disposals of property and equipment	8	54	29
Loss from extinguishment of debt.....	—	2,338	—
Write-off of deferred initial public offering costs	—	—	594
Impairment of long-lived assets	352	—	320
Amortization of premiums on short-term investments	(357)	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(50,673)	(41,184)	(26,354)
Inventories.....	(2,953)	10,828	(13,256)
Prepaid expenses and other current assets.....	(306)	(6,514)	(544)
Deferred cost of revenue	2,261	(1,959)	(2,885)
Other noncurrent assets	(732)	(2,794)	448
Accounts payable	(98)	24,315	(2,808)
Accrued liabilities.....	17,914	24,127	17,796
Other long-term liabilities	(1,101)	3,579	294
Deferred revenue	10,063	29,976	19,786
Net cash provided by (used in) operating activities	<u>13,922</u>	<u>37,292</u>	<u>(32,463)</u>
Cash flows from investing activities:			
Purchase of property and equipment.....	(18,327)	(9,229)	(8,596)
Purchase of business, net of cash acquired	—	(2,959)	—
Purchases of short-term investments.....	(53,806)	—	—
Sales/maturities of short-term investments	12,000	—	—
Change in deposits	—	(80)	29
Net cash used in investing activities.....	<u>(60,133)</u>	<u>(12,268)</u>	<u>(8,567)</u>
Cash flows from financing activities:			
Payments of costs related to initial public offering.....	—	—	(594)
Proceeds from borrowings, net	—	24,691	15,000
Repayments of borrowings	—	(40,446)	(15,000)
Holdback payment for a prior business acquisition	(500)	—	—
Proceeds from equity issued under incentive plans, net of repurchases	25,025	1,773	438
Proceeds from issuance of common stock pursuant to an initial public offering, net of issuance costs of \$3.1 million	—	131,646	—
Net cash provided by financing activities	<u>24,525</u>	<u>117,664</u>	<u>(156)</u>
Net (Decrease) Increase in Cash	(21,686)	142,688	(41,186)
Cash and cash equivalents—Beginning of period.....	177,250	34,562	75,748
Cash and cash equivalents—End of period.....	<u>\$ 155,564</u>	<u>\$ 177,250</u>	<u>\$ 34,562</u>
Supplemental disclosures of cash flow information:			
Cash paid for interest	<u>\$ 493</u>	<u>\$ 1,149</u>	<u>\$ 236</u>
Cash paid for income taxes	<u>\$ 564</u>	<u>\$ 222</u>	<u>\$ 121</u>
Supplemental disclosures of noncash investing and financing activities:			
Unpaid portion of property and equipment purchases	<u>\$ 1,617</u>	<u>\$ 1,250</u>	<u>\$ 306</u>
Fair value of preferred stock warrants reclassified to additional paid in capital ...	<u>\$ —</u>	<u>\$ 52,355</u>	<u>\$ —</u>
Issuance of convertible preferred stock warrants in connection with debt	<u>\$ —</u>	<u>\$ 2,032</u>	<u>\$ —</u>

See accompanying Notes to Consolidated Financial Statements.

ROKU, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. THE COMPANY

Organization and Description of Business

Roku, Inc. (the “Company” or “Roku”), was formed in October 2002 as Roku LLC under the laws of the State of Delaware. On February 1, 2008, Roku LLC was converted into Roku, Inc., a Delaware corporation. The Company’s TV streaming platform allows users to easily discover and access a wide variety of movies and TV episodes, as well as live sports, music, news and more. The Company operates in two reportable segments and generates revenue through the sale of streaming players, advertising, subscription and transaction revenue sharing, as well as through licensing arrangements with TV brands and cable, satellite, and telecommunication service operators, or service operators.

Initial Public Offering

On October 2, 2017, the Company completed its initial public offering, or IPO, of Class A common stock, in which it sold 10.4 million shares, including 1.4 million shares pursuant to the underwriters’ over-allotment option. The shares were sold at an IPO price of \$14.00 per share for net proceeds of \$134.8 million, after deducting underwriting discounts and commissions of \$10.1 million. Additionally, offering costs incurred by the Company were \$3.1 million. Upon the closing of the Company’s IPO, all outstanding shares of its convertible preferred stock automatically converted into 80.8 million shares of Class B common stock and all outstanding convertible preferred stock warrants automatically converted to Class B common stock warrants on a one-for-one basis. Following the IPO, we have two classes of authorized common stock – Class A common stock and Class B common stock. Class A common stock entitles holders to one vote per share, and Class B common stock entitles holders to 10 votes per share.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The consolidated financial statements, which include the accounts of Roku, Inc. and its wholly-owned subsidiaries, have been prepared in conformity with accounting principles generally accepted in the United States, or U.S. GAAP. All intercompany accounts and transactions have been eliminated in consolidation.

Fiscal Year

In 2017, the Company changed the fiscal year-end to match the calendar year-end. Prior to 2017, the Company’s fiscal year was the 52- or 53-week period that ended on the last Saturday of December. Fiscal year 2016 ended on December 31, 2016 and spanned 53 weeks.

Use of Estimates

The preparation of the Company’s consolidated financial statements in accordance with U.S. GAAP requires management to make certain estimates, judgments, and assumptions that affect the reported amounts of assets and liabilities and related disclosures at the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented. Significant items subject to such estimates include revenue recognition for multiple element arrangements, determination of variable consideration, stand-alone selling prices, gross versus net revenue reporting, customer versus vendor relationship, sales return reserves, customer incentive programs, inventory valuation, the valuation of deferred income tax assets, the recognition and disclosure of contingent liabilities and stock-based compensation. The Company bases its estimates on historical experience and on various other assumptions that the Company believes to be reasonable under the circumstances. Actual results may differ from the Company’s estimates.

Comprehensive Loss

Comprehensive loss includes unrealized losses on the Company's short-term investments for the year ended December 31, 2018. Income taxes on the unrealized loss are not material for the year ended December 31, 2018. The Company had no short-term investments during the years ended December 31, 2017 and 2016. As a result, comprehensive loss was equal to the net loss for the years ended December 31, 2017 and 2016.

Foreign Currency

The functional currency of the Company's foreign subsidiaries is the U.S. dollar. Monetary assets and liabilities of these subsidiaries are remeasured into U.S. dollars from the local currency at rates in effect at period-end and nonmonetary assets and liabilities are remeasured at historical rates. Revenues and expenses are remeasured at average exchange rates in effect during each period. Foreign currency gains or losses from re-measurement and transaction gains or losses are recorded as other income (expense), net in the consolidated statements of operations. During the year ended December 31, 2018, the Company recorded a foreign currency loss of \$0.5 million. During the year ended December 31, 2017, the Company recorded a foreign currency gain of \$0.1 million. During the year ended December 31, 2016, the Company recorded a foreign currency loss of \$0.4 million.

Concentrations

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash, cash equivalents, short-term investments and accounts receivable. As of December 31, 2018 and 2017, 97% and 95% of the Company's cash, cash equivalents balances were managed by one financial institution. Accounts receivable are typically unsecured and are derived from revenue earned from customers. They are stated at invoice value less estimated allowances for returns, customer incentives and doubtful accounts. The Company performs ongoing credit evaluations of its customers and maintains allowances for potential credit losses.

Customers accounting for 10% or more of the Company's net revenue were as follows:

	Years Ended December 31,		
	2018	2017	2016
Customer A.....	*	*	13%
Customer B.....	*	10%	12%
Customer C.....	18%	20%	24%
Customer E.....	*	10%	*

Customers accounting for 10% or more of the Company's accounts receivable were as follows:

	As of December 31,	
	2018	2017
Customer D.....	11%	16%

Short-Term Investments

The Company considers investments in highly liquid instruments purchased with an original maturity of 90 days or less to be cash equivalents. The Company's short-term investments consist of corporate bonds, commercial paper and U.S. Government agency securities. These investments are held in the custody of one major financial institution. As of December 31, 2018, the short-term investments were classified as available-for-sale and were recorded in the consolidated balance sheet at fair value with net unrealized gains or losses reported as a separate component of accumulated other comprehensive income (loss), net of tax.

The Company recognizes an impairment charge if a decline in the fair value of its investments is considered to be other-than-temporary. The Company has determined that gross unrealized losses on short-term investments at December 31, 2018 were temporary in nature because each investment meets the Company's credit quality requirements and the Company has the ability and intent to hold these investments until they recover their unrealized losses.

Goodwill, Purchased Intangible Assets and Impairment Assessment

Goodwill represents the excess of the purchase price over the fair value of the assets acquired and liabilities assumed, if any, in a business combination. The Company reviews its goodwill for impairment annually, as of the beginning of the fourth quarter, and whenever events or changes in circumstances indicate that impairment may exist. The Company did not recognize any impairment of goodwill in the years ended December 31, 2018 and 2017.

Purchased intangible assets consist primarily of developed technology. Purchased intangible assets are recorded at fair value on the date of acquisition and amortized over their estimated useful lives following the pattern in which the economic benefits of the assets will be consumed, generally straight-line. The carrying amounts of our purchased intangible assets are periodically reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable or that the useful life is shorter than originally estimated.

Impairment of Long-Lived Assets

The Company's long-lived assets include property and equipment and other noncurrent assets and are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recovered. Recoverability of assets is measured first by comparing their carrying amounts to their future undiscounted net cash flows. If such assets are considered to be impaired, the impairment to be recognized equals the amount by which the carrying value of the asset exceeds its fair market value. The Company recorded \$0.4 million in impairment during the year ended December 31, 2018 relating to assets that are no longer in use. No impairment was recorded during the year ended December 31, 2017.

Fair Value of Financial Instruments

The Company defines fair value as 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. The Company applies fair value accounting for all assets and liabilities that are recognized or disclosed at fair value in the consolidated financial statements on a recurring basis. The carrying amounts reported in the consolidated financial statements for cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to their short-term nature.

Inventories

The Company's inventories consist primarily of finished goods and are stated at the lower of cost or market with cost determined on a first-in, first-out basis and market based on net realizable value. If the cost of the inventories exceeds their net realizable value, provisions are made currently for the difference between the cost and the market value. The Company evaluates inventory levels and purchase commitments for excess and obsolete products, based on management's assessment of future demand and market conditions.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over their estimated useful lives of the assets, generally ranging between eighteen months and five years. Leasehold improvements are amortized over the shorter of the lease term or their estimated useful lives, which is generally five years.

Website and Internal-Use Software

The Company capitalizes costs to develop its website and internal-use software. The Company expenses all costs that relate to the planning and post-implementation phases of development as incurred. The Company capitalizes subsequent costs when preliminary efforts are successfully completed, management has authorized and committed project funding, and it is probable that the project will be completed and will be used as intended. Costs incurred for enhancements that are expected to result in additional material functionality are capitalized. During the

years ended December 31, 2018, 2017 and 2016, the Company capitalized website and internal-use software development costs of \$1.0 million, \$2.6 million and \$1.8 million, respectively.

Capitalized costs are amortized using the straight-line method over an estimated useful life of the asset, which is generally two years, beginning when the asset is ready for its intended use. During the years ended December 31, 2018, 2017 and 2016, the Company amortized expenses of \$2.0 million, \$1.1 million and \$0.7 million, respectively.

Content Licensing Fees

The Company licenses content for viewing on The Roku Channel. The licensing arrangements can be for a fixed fee and/or advertising revenue share with specific windows of content availability. The Company capitalizes the content fees and records a corresponding liability at the gross amount of the liability when the license period begins, the cost of the content is known, and the content is accepted and available for streaming. The Company amortizes licensed content assets into “Cost of Revenue, Platform” over the contractual window of availability.

As of December 31, 2018 and 2017, content related expenses that met these requirements were not material.

Deferred Revenue and Deferred Cost of Revenue

The Company’s deferred revenue reflect fees received from licensing and service arrangements, including advertising, that will be recognized as revenue over time or as services are rendered. Deferred revenue balances consist of the amount of player sales allocated to unspecified upgrades or enhancements on a when-and-if available basis, licensing and services fees from service operators and TV brands, and payments from advertisers and content publishers.

Deferred cost of revenue consists mainly of personnel related costs associated with related deferred revenues and is recognized as cost of revenue in the same manner as its respective deferred revenue.

Deferred revenue and the associated deferred cost of revenue expected to be realized within one year are classified as current liabilities and current assets, respectively, and the remaining are recorded as noncurrent liabilities and noncurrent assets, respectively.

Advertising Costs

Advertising costs are expensed when incurred and are included in sales and marketing expense in the consolidated statements of operations. The Company incurred advertising costs of \$3.0 million, \$3.4 million and \$3.9 million for the years December 31, 2018, 2017 and 2016, respectively.

Stock-Based Compensation

The Company measures compensation expense for all stock-based awards, including stock options and restricted stock units granted to employees, based on the estimated fair value on the date of grant. The fair value of each stock option granted is estimated using Black-Scholes option-pricing model. Stock-based compensation is recognized on a straight-line basis over the requisite vesting period. For the year ended December 31, 2016, stock-based compensation was recorded net of estimated forfeitures using a forfeiture rate based on an analysis of the Company’s actual historical forfeitures. The Company adopted new guidance effective January 1, 2017 to recognize forfeitures as they occur.

The Company accounts for restricted stock units issued to employees based on the grant date fair value which is determined based on the closing market price of the Class A common stock on the date of grant. The expense is recognized in the Company’s consolidated statement of operations on a straight-line basis over the requisite vesting period.

Income Taxes

The Company accounts for income taxes using an asset and liability approach. Deferred tax assets and liabilities are determined based on the difference between the consolidated financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts that are more likely than not to be realized.

Net Loss per Share

Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all potential common shares outstanding and potentially dilutive securities would have been anti-dilutive.

Adoption of New Accounting Standards

On January 1, 2018, the Company adopted guidance in ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, or new revenue standard, using the modified retrospective method. The Company applied the new revenue standard to all contracts that were not completed as of January 1, 2018. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. Comparative information for prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods. Refer to Note 3 for the detail on the impact of adoption.

On January 1, 2018, the Company adopted guidance in ASU 2016-16, *Income taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)*, using the modified retrospective method. The new guidance allows a reporting entity to recognize the tax expense from the sale of the asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. The adoption of this guidance resulted in a decrease in prepaid expense and other current assets and an increase to the accumulated deficit in amounts that were not material.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, related to new accounting and reporting guidelines for leasing arrangements. The guidance requires recognition of right-to-use lease assets and lease liabilities for all leases (with the exception of short-term leases) on the balance sheet of lessees. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company will adopt this guidance on January 1, 2019 using the optional transition method and will not restate comparative periods. The Company expects adoption of the standard will result in the recognition of lease liabilities for operating leases of approximately \$40-\$50 million and right-of-use assets of approximately \$35-\$45 million at January 1, 2019, with no material impacts to its consolidated statements of operations.

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Topic 350), Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which requires hosting arrangements that are service contracts to follow the guidance for internal-use software to determine which implementation costs can be capitalized. The guidance is effective either prospectively or retrospectively for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted. The Company is evaluating the impact of this new guidance on the consolidated financial statements and the related disclosures.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurements (Topic 820), Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. This standard removes, modifies, and adds certain disclosure requirements for fair value measurements. This pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. The Company is currently in the process of evaluating the effects of the new guidance but does not expect the impact from this standard to be material.

3. REVENUE

On January 1, 2018, the Company adopted ASU 2014-09, Revenue from Contracts with Customers (Topic 606), (the “new revenue standard”) using the modified retrospective method. The Company applied the new revenue standard to all contracts that were not completed as of January 1, 2018. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those prior periods.

Application of practical expedients and exemptions

The Company reflected the aggregate effect of all modifications that occurred prior to the date of adoption.

The Company expensed commissions related to advertising and player sales when incurred because the amortization period is less than one year. Sales commissions are included in “Sales and marketing” expenses in the condensed consolidated statements of operations.

Impact on beginning balances

The cumulative effect of the changes made to the consolidated January 1, 2018 balance sheet for the adoption of the new revenue standard were as follows (in thousands):

Balance Sheet line items impacted	As of December 31, 2017	Adjustment on adoption of new revenue standard	As of January 1, 2018
Assets:			
Accounts receivables, net	\$ 120,553	\$ 12,728	\$ 133,281
Inventories	32,740	(108)	32,632
Prepaid expenses and other current assets.....	11,367	4,113	15,480
Deferred cost of revenue, current portion	3,007	(1,076)	1,931
Deferred cost of revenue, non-current portion	5,403	(3,885)	1,518
Other non-current assets	3,429	(222)	3,207
Liabilities:			
Accounts payable and accrued liabilities ...	128,757	1,250	130,007
Deferred revenue, current portion	34,501	8,449	42,950
Deferred revenue, non-current portion	48,511	(36,488)	12,023
Equity:			
Accumulated deficit	\$ (283,338)	\$ 38,339	\$ (244,999)

Revenue recognition

The Company enters into contracts that may include various combinations of products and services, which are generally both capable of being distinct and distinct in the context of each contract and therefore are accounted for as separate performance obligations.

Revenue is recognized when control of promised products or services is transferred to customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those products or services. This is achieved by applying the following five-step approach:

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

- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, performance obligations are satisfied.

Shipping charges billed to customers are included in revenue and the related shipping costs are included in cost of revenue. Revenue is recorded net of taxes collected or accrued. Sales taxes are recorded as current liabilities until remitted to the relevant government authority.

The Company does not have any capitalized costs associated with contract acquisition because most direct contract acquisition costs relate to contracts that are recognized over a period of one year or less.

Arrangements with multiple performance obligations

The Company's contracts may contain multiple distinct performance obligations. The computed transaction price of each contract is allocated to each performance obligation based on a relative stand-alone selling price, or SSP. For performance obligations routinely sold separately, the SSP is determined by evaluating such stand-alone sales. For those performance obligations that are not routinely sold separately, the Company maximizes the use of observable inputs and determines SSP based on a market assessment approach, or on an expected cost-plus margin approach.

Nature of products and services

Platform segment:

The Company's platform segment generates revenue from advertising sales, and content distribution and audience development activities like subscription and transaction based revenue shares, sale of branded channel buttons on remote controls and licensing arrangements with TV brands and service operators.

The Company's advertising revenue is mostly generated through video and display advertising delivered through advertising impressions. The Company enters into advertising arrangements directly with the advertiser or with their agency which purchases advertising on their behalf. Advertising is typically sold on a cost-per-thousand basis as evidenced by an Insertion Order, or IO, that specifies the terms of the arrangement including the type of ad product, pricing, insertion dates, and the number of impressions over a stated period. Revenue is recognized as the number of impressions are delivered. IOs may include multiple performance obligations as they contain distinct advertising products or services. For such arrangements, the Company allocates revenue to each performance obligation based on their relative SSPs. In addition, advertising revenue is also recognized from distinct performance obligations included in distribution arrangements with content publishers.

The Company earns revenue shares from content publishers based on user subscriptions activated or billed through the Company's platform and from purchases or rental of publishers' media. The Company's revenue share is generally equal to a fixed percentage of the price charged by the content publisher or a contractual flat fee.

The Company sells branded channel buttons on player and TV remote controls that provide one-touch access to a publishers' content. The Company typically receives a fixed fee per button for each player or TV unit sold over a defined distribution period.

The Company licenses its technology and proprietary operating system to TV brands and service operators. Arrangements with TV brands commonly include a license to the Company's technology and proprietary operating system over a specified term including updates and upgrades. Licensing revenues from TV brands are generated on a flat fee basis or from per unit licensing fees. Arrangements may also include marketing development funds paid to TV brands. Marketing development funds are reflected as a reduction to the estimated transaction price.

Arrangements with service operators generally include performance obligations comprised of a license to the technology and proprietary operating system, unspecified upgrades or enhancements, hosting of a branded channel store, and engineering and support services. The Company has determined that the license for the technology and the operating system is one performance obligation. Licensing fees from service operators are mostly generated from unit activations or flat fees and from ongoing maintenance.

Nature of performance obligations	Revenue recognition
Digital advertising	Digital advertising is comprised of performance obligations that are recognized either at a point in time or over time depending on the nature of the advertising product.
Content distribution services	The revenue share from the content publishers included in the estimated transaction price is based on the expected value for which a significant reversal of revenue is not expected to occur. The estimate of the variable consideration is based on the assessment of historical, current, and forecasted performance of the publishers' content applications. Revenue is recognized on a time elapsed basis, by day, as they are delivered over the contractual distribution term.
Branded channel buttons	The button fees included in the estimated transaction price are based on the expected value for which a significant reversal of revenue is not expected to occur. The estimate of the variable consideration is based on the Company's assessment of historical, current, and forecasted player and Roku TV volumes. Revenue is recognized on a time elapsed basis, by day, over the distribution term.
License of technology and operating system	The revenue for licensing of technology and operating system is recognized at a point in time, when the control has transferred to the customer, which usually occurs when the Company makes the IP available to the customer.
Unspecified upgrades to the IP	The revenue allocated to unspecified upgrades is recognized on a time elapsed basis, by day, over the service period.
Hosting services	Hosting fees are recognized on a time elapsed basis, by day, over the service period.
Professional services	Professional services revenue is recognized as services are provided or accepted.

Player segment:

The Company sells the majority of its players through retail distribution channels, including brick and mortar and online retailers, and through the Company's website. The Company's player revenue includes allowances for returns and sales incentives in the estimated transaction price. These estimates are based on historical experience and anticipated performance.

The Company's player revenue includes two performance obligations:

- hardware, which includes embedded software, and
- unspecified upgrades or enhancements on a when-and-if available basis.

The Company has determined that its hardware and embedded software be considered as one performance obligation because the customer cannot benefit from the hardware or the embedded software either on its own or together with other resources that are readily available to the customer.

Nature of performance obligations	Revenue recognition
Players	Revenue recognition occurs at a point in time when control has transferred to the customer, which is based on the contractual terms.
Unspecified upgrades to the software embedded in the hardware	The Company initially records the allocated value of the unspecified upgrades as deferred revenue and recognizes it into player revenue ratably on a time elapsed basis, by day, over the estimated economic life of the associated players.

Revenue disaggregation

The Company’s disaggregated revenues are represented by the two reportable segments discussed in Note 15. The disaggregation is based on the evaluations that are regularly performed by the chief operating decision maker, or CODM, for purposes of allocating resources and evaluating financial performance. The Company’s CODM is its Chief Executive Officer.

Transaction price allocated to future performance obligations

As of December 31, 2018, the Company had \$117.0 million of estimated future revenue related to outstanding performance obligations. The Company expects to recognize approximately 76% of this future revenue over the next twelve months and the remainder thereafter through 2024. This estimated future revenue excludes contracts with original durations of one year or less, amounts relating to invoicing practical expedient and variable consideration amounts attributable to royalties related to sales and usage-based revenues. The amount of revenue recognized for the three months ended December 31, 2018 from performance obligations satisfied, or partially satisfied in previous periods is \$7.2 million, which mainly relates to platform revenues.

Contract balances

Contract balances include accounts receivable, contract assets and contract liabilities or deferred revenues. Accounts receivable are recorded at the amount invoiced, net of an allowance for doubtful accounts. The payment terms with customers vary by contract. Contract assets are created when the timing of revenue recognition differs from the timing of invoicing to a customer. Contract asset is created when billing occurs subsequent to revenue recognition. Contract assets are transferred to accounts receivable when the rights to bill becomes unconditional. The Company’s contract assets are current in nature and are included in “Prepaid expenses and other current assets”. The Company did not have any impairments relating to contract assets.

Contract liabilities are recorded as deferred revenue and primarily relate to the advance consideration received from customers. Revenue is recognized when the performance obligation is completed and delivered or transfer of control occurs.

The table below reflects the contract balances of the Company (in thousands):

	As of	As of adoption
	December 31, 2018	January 1, 2018
Accounts receivable, net	\$ 183,078	\$ 133,281
Contract assets, current portion.....	753	4,113
Deferred revenue, current portion.....	45,442	42,950
Deferred revenue, non-current portion.....	19,594	12,023

Revenue recognized during the year ended December 31, 2018 from amounts included in deferred revenue at January 1, 2018 was \$38.5 million. For the year ended December 31, 2018, \$12.4 million related to the delivery of intellectual property that occurred during the quarter ended March 31, 2018 and also resulted in a decrease to contract assets of \$2.8 million as of December 31, 2018.

Impact of adoption for the year ended December 31, 2018

The most significant aspects of adopting the new revenue standard related to the Company's platform revenues. The removal of vendor-specific objective evidence requirement and the application of variable consideration in the content publisher arrangements resulted in earlier recognition of revenues as compared to periods before adoption.

The impact of adoption of the new revenue standard on the condensed consolidated balance sheet as of December 31, 2018 and statements of operations for the year ended December 31, 2018 is reflected in the table below (in thousands):

Impact on balance sheet line items	As of December 31, 2018		
	As Reported	Balances without adoption of the new revenue standard	Impact of adoption Higher / (Lower)
Assets:			
Accounts receivable, net	\$ 183,078	\$ 162,712	\$ 20,366
Prepaid expenses and other current assets.....	15,374	14,728	646
Deferred cost of revenue, current portion	1,188	3,615	(2,427)
Deferred cost of revenue, non-current portion	—	5,260	(5,260)
Liabilities:			
Accrued liabilities	91,986	89,646	2,340
Deferred revenue, current portion	45,442	51,352	(5,910)
Deferred revenue, non-current portion.....	19,594	49,559	(29,965)
Equity:			
Accumulated Deficit	\$ (253,896)	\$ (300,756)	\$ 46,860

Impact on statements of operations line items	Year Ended December 31, 2018		
	As Reported	Balances without adoption of the new revenue standard	Impact of adoption Higher / (Lower)
Net Revenue:			
Platform.....	\$ 416,863	\$ 391,677	\$ 25,186
Player.....	325,643	325,417	226
Total net revenue.....	742,506	717,094	25,412
Cost of Revenue:			
Platform.....	120,543	105,423	15,120
Player.....	289,815	289,891	(76)
Total cost of revenue.....	410,358	395,314	15,044
Gross Profit:			
Platform.....	296,320	286,254	10,066
Player.....	35,828	35,526	302
Total gross profit.....	332,148	321,780	10,368
Operating Expenses:			
Research and development.....	170,692	170,692	—
Sales and marketing	102,780	100,933	1,847
General and administrative.....	71,972	71,972	—
Total operating expenses.....	345,444	343,597	1,847
Loss from Operations	(13,296)	(21,817)	8,521
Net loss	<u>\$ (8,857)</u>	<u>\$ (17,378)</u>	<u>\$ 8,521</u>

4. BUSINESS COMBINATION

On September 6, 2017, the Company acquired all of the outstanding shares of a privately held technology company located in Denmark to enhance the Company's player product offering, for an aggregate purchase price of \$3.5 million. The Company paid \$3.0 million of the aggregate purchase price at the time of acquisition and \$0.5 million during the year ended December 31, 2018. In addition, the Company issued 0.1 million shares of its Class B common stock to two of the founders as part of a continuing services arrangement. The shares are subject to a right of repurchase which lapses over a three year period at varying prices per share. In addition, the Company incurred approximately \$0.4 million of costs related to the acquisition which is included in the general and administrative expenses for the year ended December 31, 2017.

The purchase price allocation includes \$1.4 million of goodwill and \$2.2 million of identifiable intangible assets, which primarily consist of developed technology, with an expected useful life of approximately four years. Goodwill represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired and is not expected to be deductible for income tax purposes. The goodwill in this transaction is primarily attributable to the acquired workforce and expected operating synergies.

The Company recorded an expense of \$0.6 million and \$0.2 million for amortization of intangible asset during the years ended December 31, 2018 and 2017, respectively. The estimated future amortization expenses for intangible asset is \$0.6 million, \$0.5 million and \$0.3 million for the years ending in December 31, 2019, 2020 and 2021, respectively.

5. BALANCE SHEET COMPONENTS

Balance sheet components consisted of the following:

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

	<u>As of December 31,</u>	
	<u>2018</u>	<u>2017</u>
Gross accounts receivable	\$ 204,975	\$ 138,292
Allowance for sales returns	(7,335)	(6,907)
Allowance for sales incentives	(13,750)	(10,442)
Other allowances	(812)	(390)
Total allowances	<u>(21,897)</u>	<u>(17,739)</u>
Total Accounts Receivable—net of allowances	<u>\$ 183,078</u>	<u>\$ 120,553</u>

Allowance for Sales Returns: Allowance for sales returns consist of the following activities (in thousands):

	<u>As of December 31,</u>	
	<u>2018</u>	<u>2017</u>
Beginning balance	\$ (6,907)	\$ (6,916)
Charged to revenue	(17,396)	(19,089)
Utilization of sales return reserve	16,968	19,098
Ending balance	<u>\$ (7,335)</u>	<u>\$ (6,907)</u>

Allowance for Sales Incentive: Allowance for sales incentive consisted of the following activities (in thousands):

	<u>As of December 31,</u>	
	<u>2018</u>	<u>2017</u>
Beginning balance	\$ (10,442)	\$ (8,503)
Charged to revenue	(50,958)	(44,264)
Utilization of sales incentive reserve	47,650	42,325
Ending balance	<u>\$ (13,750)</u>	<u>\$ (10,442)</u>

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

	<u>As of December 31,</u>	
	<u>2018</u>	<u>2017</u>
Computers and equipment	\$ 16,056	\$ 11,631
Leasehold improvements	18,396	8,437
Website and internal-use software	6,423	5,461
Office equipment and furniture	4,069	1,987
Total property and equipment	44,944	27,516
Accumulated depreciation and amortization	<u>(19,680)</u>	<u>(12,780)</u>
Property and Equipment, net	<u>\$ 25,264</u>	<u>\$ 14,736</u>

Depreciation and amortization expense for the years ended December 31, 2018, 2017 and 2016 and was \$7.8 million, \$5.2 million and \$5.3 million, respectively.

Accrued Liabilities: Accrued liabilities consisted of the following (in thousands):

	As of December 31,	
	2018	2017
Accrued royalty expense	\$ 7,939	\$ 17,165
Accrued inventory	6,008	2,382
Accrued payroll and related expenses	12,217	8,699
Accrued cost of revenue	22,830	12,210
Accrued payments to content publishers	32,463	24,037
Taxes and related liabilities	1,314	1,463
Customer prepayments	3,124	545
Other accrued expenses	6,091	5,843
Total Accrued Liabilities	<u>\$ 91,986</u>	<u>\$ 72,344</u>

Deferred Revenue: Deferred revenue consisted of the following (in thousands):

	As of December 31,	
	2018	2017
Platform, current	\$ 28,569	\$ 19,022
Player, current	16,873	15,479
Total deferred revenue, current	<u>45,442</u>	<u>34,501</u>
Platform, non-current	12,783	42,674
Player, non-current	6,811	5,837
Total deferred revenue, non-current	<u>19,594</u>	<u>48,511</u>
Total Deferred Revenue (See Note 3)	<u>\$ 65,036</u>	<u>\$ 83,012</u>

6. SHORT-TERM INVESTMENTS

The following is a summary of the Company's short-term investments (in thousands):

	As of December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Loss	Fair Value
Corporate bonds and commercial paper	\$ 37,168	\$ —	\$ (17)	\$ 37,151
U.S. government securities	4,995	—	—	4,995
Total Short-Term Investments	<u>\$ 42,163</u>	<u>\$ —</u>	<u>\$ (17)</u>	<u>\$ 42,146</u>

Tax amounts related to unrealized losses are not material for all periods presented.

The following table summarizes the maturities of the Company's short-term investments by contractual maturity (in thousands):

	As of December 31, 2018	
	Amortized Cost	Fair Value
Less than 1 year	\$ 42,163	\$ 42,146
Due in 1-3 years	—	—
Total Short-Term Investments	<u>\$ 42,163</u>	<u>\$ 42,146</u>

The Company did not have any short-term investments at December 31, 2017.

7. FAIR VALUE DISCLOSURE

The Company's financial assets measured at fair value are as follows (in thousands):

	As of December 31, 2018			
	Fair Value	Level 1	Level 2	Level 3
Assets:				
Cash and cash equivalents:				
Cash	\$ 147,221	\$ 147,221	\$ —	\$ —
Money market funds	8,343	8,343	—	—
Short-term investments:				
Corporate bonds and commercial paper.....	37,151	—	37,151	—
U.S. government securities	4,995	—	4,995	—
Total assets measured and recorded at fair value	<u>\$ 197,710</u>	<u>\$ 155,564</u>	<u>\$ 42,146</u>	<u>\$ —</u>

The Company did not have any cash equivalents or short-term investments at December 31, 2017.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal market (or most advantageous market, in the absence of a principal market) for the asset or liability in an orderly transaction between market participants at the measurement date. Further, the Company maximizes the use of observable inputs and minimize the use of unobservable inputs in measuring fair value, and to utilize a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The three levels of inputs used to measure fair value are as follows:

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

Financial assets and liabilities measured using Level 1 inputs include cash equivalents, accounts receivable, prepaid expenses, accounts payable and accrued liabilities.

The Company considers all highly liquid investments purchased with an original or remaining maturity of 90 days or less at the date of purchase to be cash equivalents. The Company measured money market funds of \$8.3 million as cash equivalents as of December 31, 2018 using Level 1 inputs. The Company did not have any cash equivalents as of December 31, 2017.

Level 2—Observable inputs other than quoted prices included within Level 1, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; and inputs other than quoted prices that are observable or are derived principally from, or corroborated by, observable market data by correlation or other means.

The Company measured its short-term investments using Level 2 inputs.

Level 3—Unobservable inputs that are supported by little or no market activity, are significant to the fair value of the assets or liabilities and reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances.

The Company did not have Level 3 instruments at December 31, 2018 and 2017. During the years ended December 31, 2017 and 2016, Level 3 instruments consisted of the Company's convertible preferred stock warrant liability. Pursuant to the Company's IPO in October 2017, all convertible preferred stock warrants were converted into Class B common stock warrants, which did not require further re-measurements as they were deemed permanent equity. For periods prior to the IPO, the Company's convertible preferred stock warrant liability was measured at fair value upon issuance and at each reporting date prior to the IPO. The inputs that were used to determine the estimated fair value of the convertible preferred stock warrant liability included the remaining contractual term of the warrants, the risk-free interest rate, the volatility of comparable public companies over the

remaining term, and the fair value of underlying shares. The significant unobservable inputs used in the fair value measurement of the convertible preferred stock warrant liability were the fair value of the underlying stock at the valuation date and the estimated term of the warrants.

The following table represents the activity of Level 3 instruments (in thousands):

	Years Ended December 31, 2017
Convertible preferred stock warrant liability — beginning balance	\$ 9,990
Fair value of new warrants issued	2,032
Change in fair value of preferred stock warrant liability*	40,333
Reclassification to additional paid in capital upon conversion to common warrants	(52,355)
Convertible preferred stock warrant liability — ending balance	<u>\$ —</u>

* Recognized in the consolidated statements of operations within other income (expense), net.

Assets and liabilities that are measured at fair value on a non-recurring basis

Non-financial assets such as goodwill, intangible assets, and property, plant, and equipment are evaluated for impairment and adjusted to fair value using Level 3 inputs, only when impairment is recognized. There were no indicators of impairment that required a fair value analysis during the years ended December 31, 2017. The Company recorded an impairment of \$0.4 million for long-lived assets that were no longer in use during the year ended December 31, 2018.

8. DEBT

The Company did not have any outstanding debt as of December 31, 2018 and 2017. The Company entered into a new Credit Facility in February 2019. Refer to Note 15, Subsequent Event for the details of the new Credit Facility.

Line of credit

The Company first entered into a loan and security agreement (the “LSA”) with Silicon Valley Bank, or Bank, in July 2011. The LSA was amended and restated in subsequent periods. The amended and restated loan and security agreement (the “Restated 2014 LSA”) entered into in November 2014 provides advances under a revolving line of credit up to \$30.0 million and provides for letters of credit to be issued up to \$5.0 million.

In June 2017, the Company entered into a second amendment to the Restated 2014 LSA. Advances under the second amendment carry a floating per annum interest rate equal to, at the Company’s option, (1) the prime rate or (2) LIBOR plus 2.75%, or the prime rate plus 1% depending on certain ratios. The amendment further changed the financial covenant to maintain a current ratio (calculated as current assets, divided by current liabilities less deferred revenue) greater than or equal to 1.25. The revolving line of credit terminates on June 30, 2019 at which time all outstanding advances becomes due and payable. As of December 31, 2018 and 2017, the Company was in compliance with all of the covenants in the amended Restated 2014 LSA.

On July 18, 2018, the Company entered into a third amendment to the Restated 2014 LSA. The amendment increased the amount by which the Company can utilize its line of credit to support the issuances of letters of credits from \$5.0 million to \$30.0 million.

The Company did not have any borrowings outstanding on the revolving line of credit as of December 31, 2018 and 2017. The Company had \$26.4 million and \$1.5 million outstanding in letters of credit as of December 31, 2018 and 2017, respectively. The interest rate on the line of credit was 5.25% and 4.31% as of December 31, 2018 and 2017, respectively.

Term loan

In June 2017, the Company entered into a subordinated loan agreement, or 2017 Agreement, with the Bank. The 2017 Agreement provided for a term loan borrowing of \$40.0 million, with a minimum of \$25.0 million to be initially drawn at the close of the agreement with the remaining amount available for a 24 month period, to be drawn in no less than \$5.0 million increments. Advances under the term loan incur a facility fee equal to 1% of the drawn borrowings, in addition to interest payments at an interest rate equal to, at the Company's option, (1) the prime rate plus 3.5% or (2) LIBOR plus 6.5%, subject to a 1% LIBOR floor. Additionally, the borrowings incur payment in kind interest fees equal to 2.5%, accruing to the unpaid borrowings balance, compounded monthly. Payment in kind interest may be settled in cash, at the Company's election, during the term or at maturity. The Company is also obligated to pay final payment fees ranging from 1% to 4% depending on the timing of the payment. On October 31, 2017 the Company repaid the entire amount outstanding, and subsequently terminated the 2017 Agreement. In connection with the repayment, the Company recorded a loss of \$2.3 million on extinguishment of debt in the year ended December 31, 2017.

In connection with the 2017 Agreement the Company issued 0.4 million warrants to purchase shares of Series H convertible preferred stock, with an exercise price of \$9.17340. The warrants were exercisable up to ten years from the date of issuance. Upon repayment of the amounts borrowed and the subsequent termination of the 2017 Agreement, the Company cancelled 0.1 million warrants that were contingent on future borrowings. The warrant holders exercised 0.1 million warrants during the year ended December 31, 2017 and the remaining 0.2 million warrants during the three months ended March 31, 2018. There were no outstanding warrants as of December 31, 2018.

9. STOCKHOLDERS' EQUITY (DEFICIT)

Convertible Preferred Stock

Upon the closing of the Company's IPO in 2017, all outstanding shares of its convertible preferred stock automatically converted into 80.8 million shares of Class B common stock on a one-to-one basis.

On October 2, 2017, the Company filed an Amended and Restated Certificate of Incorporation, which authorized the issuance 10 million shares of undesignated preferred stock with rights and preferences determined by the Company's Board of Directors at the time of issuance of such shares. As of December 31, 2018 and 2017, there were no shares of preferred stock issued and outstanding.

Common Stock

The Company's Amended and Restated Certificate of Incorporation filed on October 2, 2017, established two classes of authorized common stock, Class A common stock and Class B common stock. All shares of common stock outstanding immediately prior to the IPO, including shares of common stock issued upon the conversion of the convertible preferred stock, were converted into an equivalent number of shares of Class B common stock.

Holders of Class A common stock are entitled to one vote for each share of Class A common stock held on all matters submitted to a vote of stockholders and holders of Class B common stock are entitled to ten votes for each share of Class B common stock held on all matters submitted to a vote of stockholders. Except with respect to voting, the rights of the holders of Class A and Class B common stock are identical. Shares of Class B common stock are voluntarily convertible into shares of Class A common stock at the option of the holder and are generally automatically converted into shares of the Company's Class A common stock upon sale or transfer. Shares issued in connection with exercises of stock options, vesting of restricted stock units, or shares purchased under the employee stock purchase plan are generally automatically converted into shares of the Company's Class A common stock. Shares issued in connection with an exercise of the common stock warrants are converted into shares of the Company's Class B common stock.

Common Stock Reserved For Issuance

At December 31, 2018, the Company had reserved shares of common stock for issuance as follows (in thousands):

	<u>As of December 31, 2018</u>
Common stock awards granted under equity incentive plans	20,057
Common stock awards available for grant under equity incentive plan	<u>13,239</u>
Total reserved shares of common stock	<u><u>33,296</u></u>

Equity Incentive Plans

The 2008 Equity Incentive Plan (the “2008 Plan”) became effective in February 2008. The 2008 Plan allowed for the grant of incentive stock options to our employees and any of our subsidiary corporations’ employees and for the grant of non-statutory stock options and restricted stock awards to our employees, officers, directors and consultants. Options granted under the 2008 Plan were granted at a price per share equivalent to the fair market value on the date of grant. Recipients of option grants under the 2008 Plan who possess more than 10% of the combined voting power of the Company (a “10% Shareholder”) are subject to certain limitations, and incentive stock options granted to such recipients were at a price no less than 110% of the fair market value at the date of grant. Options under the 2008 Plan generally vest over four years and have a term of 10 years.

Upon the closing of the Company’s IPO, the Company’s Board of Directors adopted the 2017 Equity Incentive Plan (the “2017 Plan”). No further shares would be issued under the 2008 Plan at the time the 2017 Plan became effective. The 2017 Plan became effective in September 2017. The 2017 Plan provides for the grant of incentive stock options to our employees and for the grant of non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards, and other forms of equity compensation to our employees, directors and consultants. Options under the 2017 Plan generally vest over four years and have a term of 10 years.

The following table summarizes the Company's stock option activities under the 2008 Plan and 2017 Plan (in thousands, except per share data):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Weighted Average Grant Date Fair Value Per Share	Aggregate Intrinsic Value
Balance, December 31, 2017	26,336	\$ 4.59	6.4	—	
Granted.....	1,040	52.32	—	\$ 22.96	
Exercised.....	(10,315)	2.90	—	—	
Forfeited and expired	(690)	6.79	—	—	
Balance, December 31, 2018 - outstanding	<u>16,371</u>	\$ 8.59	6.8	—	\$384,383
Options exercisable at December 31, 2018	<u>8,849</u>	\$ 4.72	5.6	—	\$230,254

The weighted average grant-date fair value of options granted during the years ended December 31, 2018, 2017 and 2016 was \$22.96, \$3.73 and \$2.71, respectively.

The total intrinsic value of options exercised in the years ended December 31, 2018, 2017 and 2016 was \$445.9 million, \$20.4 million and \$0.4 million, respectively, and represents the difference between the fair value of the Company's common stock at the dates of exercise and the exercise price of the options.

Early Exercise of Stock Options

The 2008 Plan allows employees to exercise options granted prior to vesting, if approved by the Company's Board of Directors. The unvested shares are subject to the Company's repurchase right at the original purchase price. The proceeds from the early exercise of stock options are initially recorded as an accrued liability and reclassified to stockholders' equity as the Company's repurchase right lapses. The number of unvested shares subject to repurchase that were outstanding as of December 31, 2018 and 2017 were not material.

Stock-based Compensation

The Company measures the cost of employee services received in exchange for an award of equity instruments based on the grant date fair value of the award. Generally, stock options granted to employees vest 25% after one year and then 1/48th monthly thereafter, and restricted stock units issued generally vest 25% after one year and then 1/16th quarterly thereafter, and have a term of ten years.

The following table shows total stock-based compensation expense included in the accompanying Consolidated Statements of Operations for the years ended December 31, 2018, 2017 and 2016 (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Cost of platform revenue.....	\$ 97	\$ 81	\$ 224
Cost of player revenue	469	145	136
Research and development.....	18,538	4,714	2,766
Sales and marketing	10,459	2,817	2,292
General and administrative	8,111	3,196	2,788
Total stock-based compensation.....	<u>\$ 37,674</u>	<u>\$ 10,953</u>	<u>\$ 8,206</u>

The fair value of options granted under the 2008 Plan and 2017 Plan is estimated on the grant date using the Black-Scholes option-valuation model. This valuation model for stock-based compensation expense requires the Company to make certain assumptions and judgments about the variables used in the calculation, including the expected term, the expected volatility of the Company's common stock, an assumed risk-free interest rate, and expected dividends. In addition to these assumptions, the Company also estimated a forfeiture rate of unvested stock

options to calculate the stock-based compensation expense prior to January 1, 2017. Beginning January 1, 2017, the Company began recognizing forfeitures as they occur with the adoption of the new guidance related to accounting for stock-based payment award transactions. The impact of the change was not material to the financial statements.

Fair Value of Common Stock

Prior to our IPO, the fair value of the common stock underlying our stock options was determined by our Board of Directors. The valuations of our common stock were determined in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Our Board of Directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of our common stock at each grant date, including but not limited to the prices, rights, preferences and privileges of our preferred stock relative to the common stock, our operating and financial performance, current business conditions and projections, our stage of development, likelihood of achieving a liquidity event for the shares of common stock underlying these stock options, such as an IPO or sale of our company, given prevailing market conditions, any adjustment necessary to recognize a lack of marketability of the common stock underlying the granted options, the market performance of comparable publicly-traded companies, the U.S. and global capital market conditions.

Subsequent to our IPO, we use the market closing price for our Class A common stock as reported on The Nasdaq Global Select Market on the date of grant. The Company uses the straight-line method for expense recognition.

Expected Term

The Company's expected term represents the period that the Company's stock-based awards are expected to be outstanding and is determined based on the simplified method as described in ASC Topic 718-10-S99-1, *SEC Materials SAB Topic 14, Share-Based Payment*.

Expected Volatility

The Company's volatility factor is estimated using several comparable public company volatilities for similar option terms.

Expected Dividends

The Company has never paid cash dividends and has no present intention to pay cash dividends in the future, and as a result, the expected dividends are \$0.

Risk-Free Interest Rate

The Company bases the risk-free interest rate on the implied yield currently available on U.S. Treasury zero coupon issues with a remaining term equivalent to the estimated life of the stock-based awards. Where the expected term of the Company's stock-based awards does not correspond with the term for which an interest rate is quoted, the Company performs a straight-line interpolation to determine the rate from the available term maturities.

The assumptions used to value stock-based awards granted during the years ended December 31, 2018, 2017 and 2016 are as follows:

	Years Ended December 31,		
	2018	2017	2016
Dividend rate	—	—	—
Expected term (in years).....	5.3 - 6.8	5.3 - 6.5	5.3 - 6.5
Risk-free interest rate.....	2.32 - 2.88%	1.87 - 2.25%	1.33 - 1.95%
Expected volatility	38 - 40%	39 - 44%	44 - 46%
Fair value of common stock	—	\$2.56 - \$18.46	\$5.64 - \$6.60

As of December 31, 2018, the Company had \$38.5 million of unrecognized stock compensation expense related to unvested stock options that is expected to be recognized over a weighted-average period of approximately 2.11 years.

Stock Option Repricing

In November 2016, the Company's Board of Directors approved a common stock option repricing program whereby previously granted and unexercised options held by current employees with exercise prices above \$5.64 per share were repriced on a one-for-one basis to \$5.64 per share which represented the fair value of the Company's common stock as of the date of the repricing. There was no other modification to the vesting schedule of the previously issued option. As a result, 5.1 million unexercised options originally granted to purchase common stock at prices ranging from \$5.70 to \$7.02 per share were repriced under this program.

We treated the repricing as a modification of the original awards and calculated additional compensation costs for the difference between the fair value of the modified award and the fair value of the original award on the modification date. The repricing resulted in incremental stock-based compensation of \$1.0 million. Expense related to vested shares of \$0.1 million was expensed on the repricing date and the remaining \$0.9 million related to unvested shares is being amortized over the remaining vesting period of such options.

Restricted Stock Units

Pursuant to the 2017 Plan, the Company issued restricted stock units to employees. Restricted stock unit activity for the year ended December 31, 2018 is as follows (in thousands, except per share data):

	Number of Shares	Weighted Average Grant Date Fair Value Per Share
Balance, December 31, 2017	272	\$ 43.55
Awarded	3,827	48.26
Released	(267)	42.95
Forfeited	(146)	43.14
Balance, December 31, 2018 - outstanding	<u>3,686</u>	\$ 48.50

The grant-date fair value of restricted stock units granted during the year ended December 31, 2018 was \$184.7 million. Total unrecognized compensation cost related to restricted stock units awarded to employees was \$167.5 million, which the Company expects to recognize over 3.29 years.

Common Stock Warrants

In July 2017 the Company issued 0.4 million shares of Class B common stock upon exercise of 0.4 million Class B common stock warrants issued in 2009.

Convertible Preferred Stock Warrants

Immediately prior to the Company's IPO, warrants to purchase 2.2 million shares of convertible preferred stock were outstanding. The warrants were automatically converted into warrants to purchase 2.2 million shares of Class B common stock upon the closing of the IPO.

Prior to the IPO, the fair value of the convertible preferred stock warrants was recorded as a liability and was remeasured at the end of each balance sheet date using the Black-Scholes option pricing model. The Company revalued the convertible preferred stock warrants as of the completion of the IPO and reclassified the outstanding preferred stock warrant liability balance to additional paid-in capital with no further re-measurement required as

Class B common stock warrants are considered permanent equity. Changes in the fair value of the convertible preferred stock warrants were recognized in the consolidated statements of operations. The Company valued the convertible preferred stock warrants using the following assumptions:

	<u>Years Ended December 31,</u>	
	<u>2017</u>	<u>2016</u>
Dividend rate	—	—
Expected term (in years)	3.0 - 9.7	3.2 - 3.9
Risk-free interest rate	1.5 - 2.3%	0.7 - 1.6%
Expected volatility.....	44 - 51%	46 - 48%

After conversion into warrants to purchase shares of Class B common stock, 1.9 million warrants were exercised and 0.1 million shares were cancelled during the year ended December 31, 2017. The warrant agreements allowed for net settlement for Class B common stock. As a result, the Company issued 1.8 million shares of Class B common stock upon exercise.

As of December 31, 2017, warrants to purchase 0.2 million shares of Class B common stock were outstanding, which were exercised during the year ended December 31, 2018. As of December 31, 2018, no warrants to purchase shares of Class B common stock remained outstanding.

10. COMMITMENTS AND CONTINGENCIES

Commitments

The Company has operating lease arrangements for office, research and development and sales and marketing space in the United States, the United Kingdom, or U.K., Denmark, and China, with various expiration dates up to 2030. In the second half of 2018, the Company entered into lease arrangements to acquire office space to house the Company's new headquarters in San Jose, California. The lease commitments for the new headquarters are a significant portion of the future minimum lease payments as of December 31, 2018.

Future minimum lease payments under all operating leases as of December 31, 2018, are as follows (in thousands):

<u>Year Ending December 31,</u>	<u>Operating Leases</u>
2019.....	\$ 16,817
2020.....	29,124
2021.....	32,034
2022.....	32,844
2023.....	33,414
Thereafter.....	223,472
Less: Sublease rental income.....	(3,711)
Total	<u>\$ 363,994</u>

In connection with its leased facilities the Company recognized a liability for asset retirement obligations in 2015 representing the present value of estimated costs to be incurred at lease expiration. The liability for asset retirement obligations was \$0.6 million and \$0.5 million as of December 31, 2018 and 2017, respectively.

Rent expense for the years ended December 31, 2018, 2017 and 2016 was \$9.7 million, \$6.9 million and \$4.6 million, respectively.

Manufacturing Purchase Commitments

The Company has various manufacturing contracts with vendors in the conduct of the normal course of its business. In order to manage future demand for our products and to ensure adequate component supply, the

Company enters into agreements with manufacturers and suppliers to procure inventory based upon certain criteria and timing. Some of these commitments are con-cancellable. As of December 31, 2018 and 2017, the Company had \$40.6 million and \$75.2 million purchase commitments for inventory, respectively.

The Company records a liability for noncancelable purchase commitments in excess of its future demand forecasts. The Company recorded \$0.1 million and \$0.6 million for these purchase commitments in “Accrued liabilities” at December 31, 2018 and 2017, respectively.

Content License Purchase Commitments

The Company licenses certain content for users to access through The Roku Channel. An obligation for licensing of content is incurred at the time the Company enters into an agreement to obtain future titles and the cost of the content is known. Certain agreements include the obligation to license rights for unknown future titles, the ultimate quantity and/or fees for which are not yet determinable as of the reporting date. At December 31, 2018, the amount recorded as obligations in “Accrued liabilities” for license purchase commitments were not material. As of December 31, 2018, the Company did not have any remaining performance obligations that are not reflected on the financial statements as they do not yet meet the criteria for asset and liability recognition.

Loss from Exit of Facilities

In January 2016, the Company moved its headquarters facilities to Los Gatos, California from Saratoga, California. The Company has entered into subleases for a portion of the former headquarters and expects to sublease the remaining portion for the remainder of the lease period. In connection with the move, the Company recognized a facility exit charge for the estimated loss on the sublease in its “Operating Expenses”. The estimated loss is comprised of the remaining fair value of lease obligations and related expenses for exited locations, as determined at the cease-use dates of those facilities, net of estimated sublease income that could be reasonably obtained in the future and will be paid out over the remaining lease terms, which end in the year ending December 31, 2020. Projected sublease income is based on management’s estimates, which are subject to change.

A summary of the Company’s exit liability activity for the years ended December 31, 2018, 2017 and 2016, is as follows (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Beginning balance	\$ 779	\$ 2,085	\$ —
Change in estimated loss from exit....	1,120	525	3,804
Non-cash adjustment	—	—	1,120
Amortization of liability	(1,052)	(1,831)	(2,839)
Ending balance	<u>\$ 847</u>	<u>\$ 779</u>	<u>\$ 2,085</u>

The Company recorded \$0.6 million and \$0.7 million of the above lease liability in “Accrued liabilities” and the remaining \$0.2 million and \$0.1 million in “Other long-term liabilities” at December 31, 2018 and 2017, respectively.

Letters of Credit

As of December 31, 2018 the Company had irrevocable letters of credit outstanding in the amount of \$26.4 million for the benefit of landlords related to noncancelable facilities leases. The letters of credit expire on various dates in 2019.

Contingencies

The Company accrues for loss contingencies, including liabilities for intellectual property licensing, when it believes such losses are probable and reasonably estimable. During the three months ended June 30, 2018, the

Company changed its estimate of certain liabilities previously recorded for intellectual property licensing and released \$8.9 million as a result of its assessment that the likelihood of payment is now remote. The reversal of \$8.9 million is recorded within cost of player revenue during the year ended December 31, 2018, in the consolidated statements of operations.

The Company is currently involved in, and may in the future be involved in, legal proceedings, claims, and investigations in the ordinary course of business, including claims for infringing patents, copyrights or other intellectual property rights related to its platform and products, or the content distributed through its platform by the Company or third-party channel developers. Although the results of these proceedings, claims, and investigations cannot be predicted with certainty, the Company does not believe that the final outcome of any matters that it is currently involved in are reasonably likely to have a material adverse effect on its business, financial condition, or results of operations.

Indemnification

Many of the Company's agreements include certain provisions for indemnifying content publishers, licensees, contract manufacturer and suppliers if the Company's products or services infringe a third party's intellectual property rights. It is not possible to determine the maximum potential amount under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each agreement. To date, the Company has not incurred any material costs as a result of such obligations and have not accrued any liabilities related to such obligations in the consolidated financial statements.

11. INCOME TAXES

The components of loss before income taxes consist of the following (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2018</u>	<u>2017</u>	<u>2016</u>
United States.....	\$ (11,128)	\$ (63,831)	\$ (42,977)
Foreign.....	1,795	637	430
Net loss before income taxes.....	<u>\$ (9,333)</u>	<u>\$ (63,194)</u>	<u>\$ (42,547)</u>

The income tax expense consisted of the following (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2018</u>	<u>2017</u>	<u>2016</u>
Current:			
State.....	\$ 114	\$ 89	\$ 50
Foreign.....	184	674	160
	298	763	210
Deferred:			
Foreign.....	(774)	(448)	1
Total.....	<u>\$ (476)</u>	<u>\$ 315</u>	<u>\$ 211</u>

The following is a reconciliation of the statutory federal income tax rate to the Company's effective tax rate:

	Years Ended December 31,		
	2018	2017	2016
U.S. federal income tax at statutory rate	21.0%	34.0%	34.0%
U.S. state and local income taxes	(1.3)	(0.2)	(0.1)
Change in valuation allowance.....	(1,039.4)	19.0	(36.9)
Federal research and development tax credit	166.2	5.2	4.8
Convertible preferred stock warrants	-	(21.7)	0.7
Stock-based compensation	859.4	1.2	(2.5)
Meals and Entertainment.....	(6.6)	(1.1)	(0.2)
Permanent items	(1.1)	—	—
Foreign rate differential.....	(1.5)	0.2	—
Tax rate change.....	2.4	(36.4)	—
Provision to return trueup.....	5.9	—	—
Other	0.1	(0.7)	(0.2)
Effective tax rate.....	<u>5.1%</u>	<u>(0.5)%</u>	<u>(0.4)%</u>

Significant components of the Company's deferred income tax assets and liabilities consist of the following (in thousands):

	As of December 31,	
	2018	2017
Deferred tax assets:		
Net operating loss carryforwards	\$ 128,829	\$ 34,843
Reserves and accruals	7,840	13,577
Research and development credits.....	39,344	15,475
Depreciation and amortization	—	288
Stock-based compensation.....	7,529	4,098
Total deferred tax assets	183,542	68,281
Deferred tax liabilities:		
Depreciation and amortization	(343)	—
Total deferred tax liabilities.....	(343)	—
Valuation allowance	(182,360)	(68,219)
Net deferred tax assets.....	<u>\$ 839</u>	<u>\$ 62</u>

A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized through future operations. As a result of the Company's analysis of all available objective evidence, both positive and negative, as of December 31, 2018, management believes it is more likely than not that the deferred tax assets will not be fully realizable. Accordingly, the Company has provided a full valuation allowance against its deferred tax assets with the exception of deferred tax assets related to foreign entities in the U.K., China and Denmark.

For federal and state income tax reporting purposes, respective net operating loss carryforwards of \$495.9 million and \$408.3 million are available to reduce future taxable income, if any. These net operating loss carryforwards will begin to expire in 2028 for federal and state income tax purposes. The federal net operating loss generated in the current year can be carried forward indefinitely.

For U.K. income tax reporting purposes, the net operating loss carryforward of \$3.0 million is available to reduce the future taxable income, if any. This net operating loss can be carried forward indefinitely. The Company also has U.K. research and development tax credit carryforwards of \$0.1 million. The credit can be carried forward indefinitely.

As of December 31, 2018, the Company has research and development tax credit carryforwards of \$33.9 million and \$23.2 million for federal and state income tax purposes, respectively. If not utilized, the federal carryforwards will begin to expire in 2028. The state tax credits can be carried forward indefinitely.

The Internal Revenue Code of 1986, as amended (the “Code”), contains provisions that may limit the net operating loss and credit carryforwards available for use in any given period upon the occurrence of certain events, including a statutorily defined significant change in ownership. Utilization of the net operating loss and tax credit carryforwards is subject to an annual limitation due to an ownership change, as defined by section 382 of the Code. The Company completed a recent study to assess whether any section 382 ownership change has occurred since the Company’s formation. Based on the study, the Company had a section 382 ownership change on December 18, 2009 and tax attributes generated by the Company through the ownership change date are subject to the limitation. The Company has determined that there were no additional ownership changes after December 18, 2009.

The total amount of unrecognized tax benefits as of December 31, 2018 is \$14.5 million which is fully composed of research and development credits. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	<u>As of December 31,</u>	
	<u>2018</u>	<u>2017</u>
Unrecognized tax benefits at beginning of year	\$ 5,843	\$ 4,368
Gross increase for tax positions of current years.....	7,053	1,475
Gross increase for tax positions of prior year.....	1,645	—
Unrecognized tax benefits balance at end of year	<u>\$ 14,541</u>	<u>\$ 5,843</u>

The Company recognizes interest and penalties related to unrecognized tax benefits as a component of its income tax expense. As of December 31, 2018, there were no accrued interest and penalties related to uncertain tax positions.

None of the Company’s unrecognized tax benefit, if recognized, would affect its effective tax rate. The Company does not believe that the amount of unrecognized tax benefits will change significantly in the next 12 months.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities. These audits include questioning the timing and amount of deductions; the nexus of income among various tax jurisdictions; and compliance with federal, state, and local tax laws. The Company is not currently under audit by the Internal Revenue Service or other similar state and local authorities. All tax years remain open to examination by major taxing jurisdictions to which the Company is subject.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act reduces the US federal corporate tax rate from 35% to 21%, imposes a one-time repatriation tax, and numerous other provisions transitioning to a territorial system, including Global Intangible Low Taxed Income, or GILTI, tax and the base erosion anti-abuse tax, or BEAT. Under U.S. GAAP, the Company is allowed to make an accounting policy choice of either (i) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred (the “period cost method”) or (ii) factoring such amounts into a company’s measurement of its deferred taxes (the “deferred method”).

In December 2018, we completed our accounting for the effect of the 2017 Tax Act within the measurement period under the SEC guidance, and this resulted in no material change to the provisional amount recorded. The Company has adopted the approach of recording the consequences of the GILTI provision of the 2017 Tax act as a period cost when incurred. Based on the Company's analysis, since Roku's average annual gross receipts is less than \$500 million for the three tax-year periods ending with the preceding tax year, the Company is not subject to BEAT.

The Tax Act enacted on December 22, 2017 modifies Section 162(m) by (1) expanding which employees are considered covered employees by including the chief financial officer, (2) providing that if an individual is a

covered employee for a taxable year beginning after December 31, 2016, the individual remains a covered employee for all future years, and (3) removing the exceptions for commissions and performance-based compensation. The IRC Section 162(m) limits the Company's ability to deduct compensation for the CEO, CFO and the three highest paid officers over \$1 million. Roku will reevaluate its 162(m) limitation calculation upon release of additional IRS guidance on the 2017 Tax Act's transition rule.

The Company will continue to indefinitely reinvest earnings from the rest of our foreign subsidiaries, which are not significant. While federal income tax expense has been recognized as a result of the Tax Act, the Company has not provided any additional deferred taxes with respect to items such as foreign withholding taxes, state income tax or foreign exchange gain or loss. It is not practicable for the Company to determine the amount of unrecognized tax expense on these reinvested international earnings.

12. RELATED-PARTY TRANSACTIONS

The Company has agreements with one of the Company's strategic investors. In the years ended December 31, 2018, 2017 and 2016, the Company recorded \$4.1 million, \$0.6 million and \$0.7 million of revenue, respectively, related to this investor. The Company had an accounts receivable balance of \$2.4 million and \$0.5 million as of December 31, 2018 and 2017, respectively, related to sales to this investor. The Company incurred expenses of \$1.3 million with this investor for the year ended December 31, 2018. The Company had an accounts payable balance of \$1.5 million payable to this investor as of December 31, 2018.

In May 2018, a member of the executive staff for one of the Company's business partners joined the Company's Board of Directors. The Company recorded revenues of \$5.6 million for the year ended December 31, 2018 with this business partner. The Company had an accounts receivable balance of \$1.0 million with this business partner as of December 31, 2018.

13. RETIREMENT PLANS

The Company maintains a 401(k) tax deferred saving plan (the "Savings Plan") for the benefit of qualified employees. Qualified employees may elect to make contributions to the Savings Plan on a biweekly basis, subject to certain limitations. The Company may make contributions to the Savings Plan at the discretion of the Board of Directors. No contributions were made for the years ended December 31, 2018, 2017 and 2016.

In 2014, the Company established a defined contribution plan in the U.K. for its U.K.-based employees. The Company contributed \$0.4 million, \$0.3 million and \$0.2 million to the plan for the years ended December 31, 2018, 2017 and 2016, respectively.

14. NET LOSS PER SHARE

The Company's basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period. For purposes of the calculation of diluted net loss per share options to purchase common stock, restricted stock units, unvested shares of common stock issued upon the early exercise of stock options, convertible preferred stock and warrants to purchase common stock and convertible preferred stock are considered common stock equivalents but have been excluded from the calculation of diluted net loss per share as their effect is antidilutive. Because the Company has reported a net loss for the years ended December 31, 2018, 2017 and 2016, diluted net loss per common share is the same as the basic net loss per share for those years.

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

	Years Ended December 31,		
	2018	2017	2016
Numerator:			
Net loss allocable to common stockholders.....	\$ (8,857)	\$ (63,509)	\$ (42,758)
Denominator:			
Weighted-average shares used in computing net loss per share, basic and diluted.....	104,618	28,308	4,746
Net loss per share, basic and diluted	\$ (0.08)	\$ (2.24)	\$ (9.01)

The potential common shares that were excluded from the calculation of diluted net loss per share because their effect would have been antidilutive for the periods presented are as follows (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Equity awards to purchase common stock.....	20,057	26,608	22,335
Unvested shares of common stock issued upon early exercise of stock options and business acquisition	70	57	3
Warrants to purchase common stock	—	184	375
Warrants to purchase convertible preferred stock	—	—	1,817
Convertible preferred stock.....	—	—	80,844
Total	<u>20,127</u>	<u>26,849</u>	<u>105,374</u>

15. SEGMENT INFORMATION

An operating segment is defined as a component of an entity for which discrete financial information is available that is evaluated regularly by the chief operating decision maker, or CODM, for purposes of allocating resources and evaluating financial performance. The Company uses the management approach to determine the segment financial information that should be disaggregated and presented separately in the Company's notes to its consolidated financial statements. The management approach is based on the manner by which management has organized the segments within the Company for making operating decisions, allocating resources, and assessing performance.

The Company reports its financial results consistent with the manner in which financial information is viewed by management for decision-making purposes. The Company does not manage operating expenses such as research and development, sales and marketing and general and administrative expenses at the segment level.

The Company's CODM is its Chief Executive Officer, and the CODM evaluates performance and makes decisions about allocating resources to its operating segments based on financial information presented on a consolidated basis and on revenue and gross profit for each operating segment. In the second quarter of 2017 the Company changed the operating segments to combine one of the previous operating segments with two existing segments to reflect how the CODM evaluates performance and allocates resources. This change did not result in a change to the reportable segments.

The Company is organized into two reportable segments as follows:

Platform

Consists primarily of fees received from advertisers and content publishers, and from licensing the Company's technology and proprietary operating system with TV brands and service operators. Platform revenue primarily

includes fees earned from the sale of digital advertising and revenue share from new or recurring user subscriptions activated through the Company's platform and revenue share from user purchases of content publishers' media through its platform. The Company also earns revenue from the sale of branded channel buttons on player and TV remote controls.

Player

Consists primarily of net sales of streaming media players and accessories through retailers and distributors, as well as directly to customers through the Company's website.

The Company does not allocate property and equipment or any other assets or capital expenditures to reportable segments. Operating expenses are not managed at the segment level.

The Company evaluates the performance of its reportable segments based on the financial measures, including segment gross profit, which are regularly reviewed by the CODM and provide insight into the individual segments and their ability to contribute to Company's operating results.

Customers accounting for 10% or more of segment revenue, net, were as follows:

	Years Ended December 31,		
	2018	2017	2016
<i>Platform segment revenue</i>			
Customer B.....	*	*	15%
Customer E.....	*	13%	10%
<i>Player segment revenue</i>			
Customer A.....	15%	15%	18%
Customer B.....	15%	12%	11%
Customer C.....	38%	34%	32%

Revenue in international markets was less than 10% in each of the periods presented. Substantially all Company assets were held in the United States and were attributable to the operations in the United States as of December 31, 2018 and 2017.

16. QUARTERLY FINANCIAL DATA (Unaudited)

The following table summarizes the Company's information on total revenue, gross profit, net income (loss) and earnings per share by quarter for the years ended December 31, 2018 and 2017. This data was derived from the Company's unaudited consolidated financial statements (in thousands, except per share data):

	Three Months Ended			
	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018
Total Revenue.....	\$ 275,739	\$ 173,381	\$ 156,810	\$ 136,576
Gross Profit.....	112,291	78,993	77,752	63,112
Net income (loss) attributable to common stockholders.....	6,778	(9,527)	526	(6,634)
Basic net income (loss) per share attributable to common stockholders.....	0.06	(0.09)	0.01	(0.07)
Diluted net income (loss) per share attributable to common stockholders.....	0.05	(0.09)	0.00	(0.07)

	Three Months Ended			
	Dec 31, 2017	Sep 30, 2017	Jun 30, 2017	Mar 31, 2017
Total Revenue.....	\$ 188,261	\$ 124,782	\$ 99,627	\$ 100,093
Gross Profit.....	73,461	49,895	37,637	38,840
Net income (loss) attributable to common stockholders.....	6,941	(46,235)	(15,513)	(8,702)
Basic net income (loss) per share attributable to common stockholders.....	0.07	(8.79)	(3.18)	(1.79)
Diluted net income (loss) per share attributable to common stockholders.....	0.06	(8.79)	(3.18)	(1.79)

17. SUBSEQUENT EVENT

On February 19, 2019 (the "Closing Date"), the Company entered into a Credit Agreement (the "Credit Agreement") with Morgan Stanley Senior Funding, Inc. The Credit Agreement provides for (i) a four-year revolving credit facility in the aggregate principal amount of up to \$75.0 million (the "Revolving Credit Facility"), (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$75.0 million (the "Term Loan A Facility") and (iii) an uncommitted incremental facility, subject to the satisfaction of certain financial and other conditions, in the amount of up to (v) \$50.0 million, plus (w) 1.0x of our consolidated EBITDA for the most recently completed four fiscal quarter period, plus (x) an additional amount at our discretion, so long as, on a pro forma basis at the time of incurrence, our secured leverage ratio does not exceed 1.50 to 1.00, plus (y) voluntary prepayments of the Revolving Credit Facility and Term Loan A Facility to the extent accompanied by concurrent reductions to the applicable Credit Facility, plus (z) for up to 90 days after the Closing Date, \$75.0 million (together with the Revolving Credit Facility and the Term Loan A Facility, collectively, the "Credit Facility"). Borrowings under the Term Loan A Facility may be made by the Company up to 9 months immediately following the Closing Date. The Company did not make any borrowings under the Credit Agreement on the Closing Date. On or around the Closing Date, except for certain letters of credit, which were cash collateralized by approximately \$26.3 million, the Company also repaid all outstanding obligations under its Amended and Restated Loan and Security Agreement, entered into with Silicon Valley Bank on November 18, 2014 (as amended prior to the date hereof, the "SVB Loan Agreement"), and the SVB Loan Agreement was terminated.

Loans under the Credit Facility bear interest at a rate equal to, at the Company's election (i) an alternate base rate, based upon the highest of (x) the prime rate, (y) the federal funds effective date plus ½ of 1% and (z) the one-month LIBOR plus 1%, in each case plus an applicable margin of up to 1% per annum, with step-downs based on its secured leverage ratio or (2) an adjusted one-, two-, three-, or six month LIBOR, at its election, plus an applicable margin of up to 2% per annum, with step-downs based on its secured leverage ratio.

The Company's obligations under the Credit Agreement are secured by substantially all of its assets. In the future, certain of its direct and indirect subsidiaries may be required to guarantee the Credit Agreement. The Company may prepay, and in circumstances are required to prepay, loans under the Credit Agreement without payment of a premium. The Credit Agreement contains customary representations and warranties, customary affirmative and negative covenants, a financial covenant that is tested quarterly and requires the Company to maintain a certain adjusted quick ratio, and customary events of default.

Loans under the Term Loan A Facility will amortize in equal quarterly installments beginning on the last day of the fiscal quarter ending after the date of the initial borrowing under the Term Loan A Facility, in an aggregate annual amount equal to (i) on or prior to December 31, 2021, 1.25% of the drawn principal amount of the Term Loan Facility and (ii) thereafter, 2.50% of the drawn principal amount of the Term Loan Facility, with any remaining balance payable on the maturity date of the Term Loan A Facility.

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

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934, as amended, or the Exchange Act) prior to the filing of this Annual Report on Form 10-K. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures were, in design and operation, effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Our internal control over financial reporting is 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.

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 internal control over financial reporting based on the framework set forth in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework set forth in *Internal Control — Integrated Framework (2013)*, our management concluded that our internal control over financial reporting was effective as of December 31, 2018.

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in its report which is included below.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Our disclosure controls and procedures and our internal controls over financial reporting have been designed to provide reasonable assurance of achieving their objectives. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Roku, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Roku, Inc. and subsidiaries (the “Company”) 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 (COSO). 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 COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018, of the Company and our report dated March 1, 2019, expressed an unqualified opinion on those financial statements and included an explanatory paragraph related to the Company’s change in method of accounting for revenue in fiscal year 2018 due to the adoption of ASC 606.

Basis for Opinion

The Company’s management is responsible 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 Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

March 1, 2019

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to our definitive Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2018.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to our definitive Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2018.

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

The information required by this item is incorporated by reference to our definitive Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2018.

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

The information required by this item is incorporated by reference to our definitive Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2018.

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to our definitive Proxy Statement for the 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2018.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements

See Index to Financial Statements in Item 8 of this Report.

(a)(2) Financial Statement Schedule

All financial statement schedules have been omitted as the information is not required under the related instructions or is not applicable or because the information required is already included in the financial statements or the notes to those financial statements.

(a)(3) Exhibits

The documents set forth below are filed herewith or incorporated herein by reference to the location indicated.

<u>Number</u>	<u>Exhibit Title</u>	<u>Incorporated by Reference</u>			<u>Filing</u>	<u>Filed</u>
		<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Date</u>	<u>Herewith</u>
3.1	Amended and Restated Certificate of Incorporation	8-K	001-38211	3.1	10/3/2017	
3.2	Amended and Restated Bylaws	S-1/A	333-220318	3.4	9/18/2017	
4.1	Amended and Restated Investor Rights Agreement, by and among Roku, Inc. and the investors listed on Exhibit A thereto, dated November 9, 2015.	S-1	333-220318	10.1	9/1/2017	
4.2	Amendment to the Amended and Restated Investor Rights Agreement, dated March 6, 2017.	S-1	333-220318	10.2	9/1/2017	
10.1 +	Roku, Inc. 2008 Equity Incentive Plan.	S-1	333-220318	10.3	9/1/2017	
10.2 +	Forms of Option Agreement and Option Grant Notice under 2008 Equity Incentive Plan.	S-1	333-220318	10.4	9/1/2017	
10.3 +	Roku, Inc. 2017 Equity Incentive Plan.	S-1/A	333-220318	10.5	9/18/2017	
10.4 +	Forms of Option Agreement and Option Grant Notice under 2017 Equity Incentive Plan.	S-1/A	333-220318	10.6	9/18/2017	
10.5 +	Forms of Restricted Stock Unit Grant Notice and Award Agreement under 2017 Equity Incentive Plan.	S-1/A	333-220318	10.7	9/18/2017	
10.6 +	Roku, Inc. 2017 Employee Stock Purchase Plan.	S-1/A	333-220318	10.8	9/18/2017	
10.7 +	Warrant to Purchase Stock, by and between Roku, Inc. and Pearl Street Technology Finance I Onshore LP, dated June 9, 2017.	S-1	333-220318	10.22	9/1/2017	
10.8 +	Warrant to Purchase Stock, by and between Roku, Inc. and Westriver Mezzanine Loans—Loan Pool V, LLC, dated June 9, 2017.	S-1	333-220318	10.24	9/1/2017	
10.9 +	Form of Indemnification Agreement, by and between Roku, Inc. and each of its directors and executive officers.	S-1A	333-220318	10.9	9/18/2017	
10.10 +	Employment Terms Agreement, by and between Roku, Inc. and Stephen Kay, dated November 15, 2013.	S-1	333-220318	10.9	9/1/2017	
10.11 +	Employment Terms Agreement, by and between Roku, Inc. and Stephen Shannon, dated August 29, 2012.	S-1	333-220318	10.10	9/1/2017	
10.12 +	Employment Terms Agreement, by and between Roku, Inc. and Steve Loudon, dated June 11, 2015.	S-1	333-220318	10.11	9/1/2017	
10.13 +	Employment Terms Agreement, by and between Roku, Inc. and Charles Smith, dated August 27, 2012.	S-1	333-220318	10.12	9/1/2017	
10.14 +	Employment Terms Agreement, by and between Roku, Inc. and Scott Rosenberg, dated October 30, 2012.	S-1	333-220318	10.13	9/1/2017	
10.15 +	Roku, Inc. Severance Benefit Plan.	S-1	333-220318	10.25	9/1/2017	
10.16	Sublease for 170/180 Knowles Drive, by and between Roku, Inc. and Netflix, Inc., dated August 18, 2015.	S-1	333-220318	10.26	9/1/2017	
10.17	Sublease for 100 Winchester Circle, by and between Roku, Inc. and Netflix, Inc., dated August 18, 2015.	S-1	333-220318	10.27	9/1/2017	

10.18	Sublease for 150 Winchester Circle, by and between Roku, Inc. and Netflix, Inc., dated August 18, 2015.	S-1	333-220318	10.28	9/1/2017	
10.19 +	Independent Contractor Services Agreement by and between Roku, Inc. and Neil Hunt, dated September 10, 2017.	S-1/A	333-220318	10.30	9/18/2017	
10.20	Amended and Restated Loan and Security Agreement, by and between Roku, Inc. and Silicon Valley Bank, dated November 18, 2014.	S-1	333-220318	10.14	9/1/2017	
10.21	First Amendment to Amended and Restated Loan and Security Agreement, by and between Roku, Inc. and Silicon Valley Bank, dated May 14, 2015.	S-1	333-220318	10.15	9/1/2017	
10.22	Second Amendment to Amended and Restated Loan and Security Agreement, by and between Roku, Inc. and Silicon Valley Bank, June 9, 2017.	S-1	333-220318	10.16	9/1/2017	
10.23	Subordinated Loan and Security Agreement, by and between Roku, Inc. and Silicon Valley Bank, dated June 9, 2017.	S-1	333-220318	10.17	9/1/2017	
10.24	Forms of Option Agreement and Option Grant Notice under 2017 Equity Incentive Plan.	10-Q	001-38211	10.24	8/10/2018	
10.25	Third Amendment to Amended and Restated Loan and Security Agreement, by and between Roku, Inc. and Silicon Valley Bank, July 18, 2018.	10-Q	001-38211	10.25	8/10/2018	
10.26	Coleman Highline Office Lease by and between Roku, Inc. and Cap Phase 1, LLC dated August 1, 2018 (1155 Coleman Ave)	10-Q	001-38211	10.26	8/10/2018	
10.27	Coleman Highline Office Lease by and between Roku, Inc. and Cap Oz 34, LLC dated August 1, 2018 (1173/1167/1161 Coleman Ave)	10-Q	001-38211	10.27	8/10/2018	
10.28	Executive Supplemental Stock Option Program Enrollment Form	8-K	001-38211	10.1	12/7/2018	
10.29	Forms of Option Grant Notice and Executive Supplemental Stock Option Agreement and Option Grant Notice under 2017 Equity Incentive Plan	8-K	001-38211	10.2	12/7/2018	
10.30	First Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Phase 1, LLC dated November 12, 2018 (1155 Coleman Ave)					X
10.31	First Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Oz 34, LLC dated November 18, 2018 (1173/1167/1161 Coleman Ave)					X
10.32	Credit Agreement, dated as of February 19, 2019, by and among Roku, Inc., Morgan Stanley Senior Funding, Inc., as lender, issuing bank, administrative agent and collateral agent, and the other issuing banks and lenders party thereto from time to time.					X
21.1	List of Subsidiaries of the Roku, Inc.	10-K	001-38211	21.1	3/1/2018	
23.1	Consent of Independent Registered Public Accounting Firm.					X
24.1	Power of Attorney					X
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. *					X
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. *					X
101.INS	XBRL Instance Document.					X
101.SCH	XBRL Taxonomy Extension Schema Document.					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.					X
101.DEF	XBRL Taxonomy Extension Definition.					X
101.LAB	XBRL Taxonomy Extension Label Linkbase					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.					X

* These exhibits are furnished with this Annual Report on Form 10-K and are not deemed filed with the Securities and Exchange Commission and are not incorporated by reference in any filing of Roku, 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 hereof and irrespective of any general incorporation language contained in such filings.

+Indicates a management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, on this 1st day of March 2019.

Roku, Inc.

By: /s/ Anthony Wood

Anthony Wood
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Steve Louden

Steve Louden
Chief Financial Officer
(Principal Financial Officer)

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