

**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, 2022

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

4841
(Primary standard industrial code number)

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

**1155 Coleman Avenue
San Jose, California 95110**

(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	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, \$0.0001 par value	ROKU	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 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes No

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b).

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, 2022, 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 approximately \$9.9 billion. 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, 2023, the registrant had 122,684,437 shares of Class A common stock, \$0.0001 par value per share and 17,424,911 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 "Proxy Statement") for the 2023 Annual Meeting of Stockholders. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2022.

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NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (“Annual Report”) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (“Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (“Exchange Act”), about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts in this Annual 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,” “would,” “target,” or the negative of these terms or other similar expressions. We caution you that the foregoing may not encompass all of the forward-looking statements made in this Annual Report.

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 Annual Report, regarding, among other things:

- our financial performance, including our revenue, cost of revenue, operating expenses, and profitability;*
- the impact of supply chain disruptions, inflationary pressures, recessionary fears, the COVID-19 pandemic and geopolitical conflicts on our business, operations, and the markets and communities in which we and our advertisers, content providers, licensed Roku TV partners, other device licensees, manufacturers, suppliers, retailers, and users operate;*
- our ability to attract and retain users and increase streaming hours;*
- our ability to attract and retain advertisers;*
- our ability to attract and retain TV brands, manufacturing partners, and service operators to license and deploy our technology;*
- our ability to produce or 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 and 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;*
- our ability to develop and launch new products and provide ancillary services and support;*
- our ability to integrate acquired businesses, products, and technologies;*
- our ability to expand our products and services into adjacent markets such as the smart home market, scale our operations in these markets, and do so profitably over time;*
- 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;*
- our ability to address potential and actual security breaches and system failures involving our products, systems and operations;*
- our ability to maintain, protect, and enhance our intellectual property;*
- our ability to obtain financing on favorable terms, including our ability to enter into new credit agreements; 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 privacy and data protection regulations in various U.S. and international jurisdictions.*

Other sections of this Annual 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 Annual Report or to conform these statements to actual results or to changes in our expectations. You should read this Annual Report, and the documents referenced in and filed as exhibits to this Annual 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 (roku.com/investor), U.S. Securities and Exchange Commission (“SEC”) filings, webcasts, press releases, and conference calls. We use these mediums to communicate with investors and the general public about our company, our products and services, and other issues. It is possible that the information that we make available may be deemed to be material information. We therefore encourage investors, the media, and others interested in our company to review the information that we post on our investor relations website.

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.

PART I

Item 1: Business

Overview

Roku, Inc. (“Roku,” “the Company,” “we,” or “us”) is the leading TV streaming platform in the United States, Mexico, and Canada by hours streamed.

We pioneered streaming to the TV. We believe that all TV content and all TV advertising will be streamed. The shift of the TV ecosystem to streaming continues and is expanding TV’s capabilities for consumers, content publishers, advertisers, and other industry participants. TV streaming is now mainstream. In 2022, for the first time viewers in the United States spent more TV time streaming than watching cable, and “cutting the cord” from traditional TV services has accelerated. Essentially every major media company has entered TV streaming and launched a streaming service, with several expanding beyond pure subscription models to new ad-supported options. Similarly, advertisers can use TV streaming to reach consumers that are increasingly unreachable on traditional TV while also benefiting from the digital advertising capabilities that TV streaming platforms deliver.

Our Strategy

Our mission is to be the global TV streaming platform that connects and benefits the entire TV ecosystem of consumers, content publishers, and advertisers. Through our TV streaming platform, we connect consumers to the entertainment they love, enable content publishers to build, engage, and monetize large audiences, and provide advertisers with unique capabilities to reach consumers. The foundation of our platform is the Roku operating system (the “Roku OS”), which is purpose built for TV streaming.

The Roku OS powers our Roku streaming devices. Roku streaming devices include Roku streaming players, Roku Streambars, and TVs powered by Roku OS (which include TVs that are manufactured and sold by our licensed Roku TV partners (“Roku TV models”) and our own TVs that will be available to purchase beginning in 2023 (“Roku-branded TVs”). We license the Roku OS to our licensed Roku TV partners who leverage our smart TV reference designs, and then manufacture and sell Roku TV models. In January 2023, we announced the launch of Roku Select and Roku Plus Series TVs, a new line of Roku-branded TVs that will be designed, made, and sold by us, which will also be powered by the Roku OS. The Roku OS is designed to run on low-cost hardware which enables us and our licensed Roku TV partners to sell streaming players and TVs at affordable prices. Consumers connect their Roku streaming devices to our streaming platform via a broadband network and are able to access a wide selection of content through a streaming experience that is both delightful and easy to use.

The features and functionality of our platform, powered by the Roku OS, enable us to serve content publishers, advertisers, licensed Roku TV partners, and other industry participants. Content publishers can reach our highly-engaged user base of 70.0 million active accounts and use our billing services and data insight tools. Advertisers reach TV viewers at scale with targeted and measurable ads. Licensed Roku TV partners can build market share by offering smart TVs in a range of sizes and price points, and retailers can offer customers Roku’s highly-rated streaming devices online and in stores. We continue to focus significant resources to advance the Roku OS; to provide an industry-leading platform for our consumers, content publishers, and advertisers; to obtain content for our platform that attracts users, including our own original content; and to extend Roku’s advantage as the global shift to TV streaming continues.

In 2022, we extended our ecosystem and launched new smart home products to build new service revenue streams. Our smart home product offering includes cameras, video doorbells, plugs, light bulbs, and light strips, along with a Roku Smart Home mobile app for iOS and Android. We offer subscription plans for our cameras and video doorbells that provide users with the ability to view cloud recordings of the videos and to receive AI-based alerts (e.g., person, package, vehicle, pet). One of our smart home priorities is interoperability, and Roku Smart Home is compatible with Google Home, Alexa, and Roku Voice. The Roku video doorbells and cameras also integrate with the Roku OS, allowing users to view live video streams and receive real-time notifications directly on their TVs. The products are available on our website at Roku.com and in-store exclusively at Walmart, America’s #1 retailer, in nearly 3,500 locations where Roku is the #1 smart home brand by shelf space. Similar to our TV streaming business model, we plan to build scale with these devices and then monetize through smart home services.

Our Business Model

Three core areas of focus define our business model. First, we grow scale by increasing our active accounts. Second, we grow engagement by increasing the hours of content streamed through our platform. And third, we grow monetization of the activities that consumers engage in through our platform. Furthermore, our business model is designed to fulfill the needs of the participants in the TV streaming ecosystem: consumers, content publishers, advertisers, licensed Roku TV partners, other device licensees, and retailers.

Scale: Increasing the number of active accounts

We make access to TV streaming affordable in part by offering a broad lineup of streaming players, at various price points, that customers can use to easily turn (nearly) any TV into a smart TV. Audio is an important part of the TV streaming experience, and we also offer the Roku Streambar (a soundbar with a built-in streaming player), Roku wireless speakers that seamlessly connect to TVs powered by Roku OS, and Roku Wireless Subwoofers. Additionally, we offer customers the choice to build an audio experience with third-party products through The Roku TV Ready program. Through this partnership with audio companies, we enable their audio products to work seamlessly with TVs powered by Roku OS. On a periodic basis, we launch new streaming players and provide updates via the Roku OS to continuously offer an exceptional TV streaming experience with the highest performance at an affordable price.

We also license the Roku OS to licensed Roku TV partners that manufacture and sell Roku TV models that integrate the Roku OS to enable basic TV functions and connect to our TV streaming platform. We have driven strong active account growth through our Roku TV licensing program. Using our reference designs results in relatively low hardware costs, enabling these TV brand licensees to manufacture and sell smart TVs that are competitively priced for consumers and that are automatically updated whenever we issue a Roku OS update.

We also recently announced the launch of a new line of Roku-branded TVs (the Roku Select and Roku Plus Series TVs) that will be designed, made, and sold by us in 2023. These TVs will complement our successful Roku TV licensing program. We believe our Roku-branded TVs will enable us to further grow our leadership position and expand into the higher-end spectrum of performance TVs. Roku-branded TVs will also help us innovate more quickly in all aspects of hardware and software and test directly with consumers, improving the product and consumer experience and strengthening the entire Roku TV ecosystem.

We also license the Roku OS and our streaming player designs, as well as provide ongoing technology and support services, to certain international pay TV and telecommunications service operators that distribute co-branded players to their subscribers in their markets.

Through the Roku platform, we provide consumers tremendous choice, value, and an exceptional user experience. We have been able to significantly scale our active account base over a multi-year period. In 2022, we added 9.9 million net new active accounts, ending the year with 70.0 million active accounts.

Engagement: Growing streaming hours

We believe that offering users a wide range of content and an easy-to-use interface drives increased engagement by delivering a better overall streaming experience. Streaming hours on our platform grew from 73.2 billion hours in 2021 to 87.4 billion hours in 2022, as our active accounts grew through the distribution of Roku streaming devices.

Through our streaming platform, we make it easy for our users to watch their favorite TV shows and movies, as well as listen to their favorite music and podcasts. Furthermore, we believe our platform offers users an exceptional TV streaming experience through a user interface that is delightful and easy to use. From the Roku home screen, our users can easily find and access TV shows, movies, news, sports, and more across a wide variety of channels available on our streaming platform. In 2022, we added Live TV and What to Watch features to the Roku Home Screen Menu to make it even easier for viewers to quickly find the content they want. We also launched an all-new Sports experience that gives consumers easy access to live and upcoming sports across the Roku platform from a centralized location. And Roku's powerful universal search makes it fast and easy for users to find the content they are looking for — regardless of the channel it is on. Additionally, users have choice in how much they want to spend on content through a broad array of options on an ad-supported, subscription, or transactional basis. Our direct relationship with our users provides us with detailed insights about their behavior on our platform, including certain content they search for, the channels they install, the channels they watch, and certain content that they purchase or subscribe to on our platform. This first party data enables us to develop actionable insights such as content recommendations to improve our users' experience.

Our significant scale, ability to reach highly engaged streamers, tools that enable seamless sign ups (like Roku Pay), and marketing/discovery features make us an attractive platform to content publishers. They can also reach those users who no longer use or never used traditional TV services. As consumers shift to TV streaming, content publishers that use our platform are able to reach these streaming audiences at scale and engage users directly.

The Roku Channel is our owned and operated streaming channel that drives engagement on our platform by providing users with free, ad-supported access to a large and broad library of content. This content is available both on demand and through more than 350 linear channels — all accessible from a single app on our platform. The Roku Channel also offers paid, subscription-based content from dozens of content partners through Premium Subscriptions, which gives users the ability to browse content before signing up, obtain free trials for subscriptions, sign up in one-click, and enjoy simple subscription management with a single monthly bill. In 2022, The Roku Channel was a top 5 channel on our platform in the U.S. by both Active Account Reach and Streaming Hour engagement.

The Roku Channel is a core strategic asset that simultaneously benefits consumers, content partners, and advertisers, while generating increasing platform revenue. For viewers, The Roku Channel is a compelling destination for a diverse selection of free and paid entertainment, providing content through linear channels and on demand offerings. For content owners, The Roku Channel provides a variety of options to distribute and monetize content through both licensing agreements and Premium Subscriptions. And for both content owners and advertisers, The Roku Channel delivers a large and engaged audience at scale that we believe will continue to grow. Owning and operating both The Roku Channel and the Roku platform creates unique value, making us a leader in free content, positioning us to be a valuable partner to content owners, and providing a large source of ad inventory.

Our strategy for The Roku Channel is to drive engagement through a broad portfolio of quality content consisting of TV shows, movies, news, sports, lifestyle, and more in both on demand and linear channel formats. The foundation of our content strategy is revenue share and fixed licensing agreements and, to a smaller extent, original programming. We launched our original programming, “Roku Originals” on The Roku Channel in 2021 and have continued to build upon this library as it offers compelling, exclusive value to both consumers and advertisers. Our content spend is intended to be commensurate with the growth trajectory of The Roku Channel and also the broader macro environment.

The Roku Channel is available in the United States, the United Kingdom, and Canada, and in 2022, we launched The Roku Channel in Mexico. In the United States, The Roku Channel features a diverse lineup of more than 80,000 free movies and TV shows, including original and exclusive content, 350+ free linear television channels, free ad-supported entertainment for kids and family with more than 10,000 titles, and more than 50 premium subscription channels.

Monetization: Growing our revenue and gross profit by monetizing user activity

We generate platform revenue primarily through advertising and content distribution services. Our sophisticated and leading TV streaming platform enables advertisers and content publishers to reach audiences that are increasingly unreachable on traditional TV. Each user on our platform creates multiple revenue opportunities for Roku, whether they are opening the Roku home page, enjoying ad-supported content, purchasing content, or simply using a Roku remote. We monetize our users’ engagement on our platform through a variety of services and capabilities, including sales of subscription or transaction-based content, billing services, brand sponsorship and promotions, and video advertising in ad-supported channels. We believe that running relevant display and video ads enhances the user experience on our platform. We measure monetization of our platform by calculating the average revenue per user (“ARPU”), which we believe represents the inherent value of our business model, and gross profit. ARPU (which we measure on a trailing 12-month basis) was \$41.68 as of December 31, 2022 compared to \$40.67 as of December 31, 2021. Our gross profit was \$1,441.1 million and \$1,408.6 million for the years ended December 31, 2022 and December 31, 2021, respectively.

We make it easy for content publishers to distribute and monetize their streaming content through three primary business models: subscription video on demand (“SVOD”) that includes subscriptions to individual video on demand channels and so-called virtual multichannel video programming distribution (“vMVPD”) services; ad-supported, which includes advertising video on demand (“AVOD”) channels with on demand content that do not charge a subscription fee to users, as well as free ad-supported streaming TV (“FAST”), which we define as free, ad-supported linear streaming TV; and transaction video on demand (“TVOD”) that includes channels that offer a la carte content purchases or rentals. Through Roku Pay, our proprietary platform billing solution, we are also able to assist content partners with billing services, including billing users for in-channel purchases like content rentals, managing subscriptions, and customer invoices. Roku Pay allows publishers to enable a frictionless, “one-click” signup within

the app, and we believe this key benefit simplifies user subscription signups and drives purchase and retention for our content publishers.

Content publishers also have access to our media and entertainment promotional capabilities and tools to help them attract, engage, and retain viewers by investing in promoting their content to our users on our platform. Content publishers can use a variety of ad placements, including native display ads on the Roku home screen or a screen saver to drive channel downloads, promote a channel's content, and direct traffic to their channels in order to drive subscriptions or movie and TV show consumption. We also derive revenue from the sale of branded channel buttons on streaming player and Roku TV remote controls that are intended to increase incremental usage of the channel by allowing users to launch straight into the channel from any screen. Our analytics and reporting assist content publishers with analyzing viewership trends and metrics for specific titles. Using machine learning, we also can help content publishers target new audiences that are more likely to subscribe to their services.

Just as ads evolved decades ago when TV replaced radio as the primary entertainment medium, ads on TV streaming offer new and more performant opportunities than traditional TV. We offer advertisers a unique and effective set of tools to reach consumers both on and off the Roku platform. Advertisers are able to leverage the combination of our significant scale, our direct relationship with our users, and our advertising capabilities to serve relevant advertisements. Advertisers on our platform also can measure both the effectiveness of the ads served and their return on investment.

OneView is our ad buying platform built for TV streaming. Advertisers use OneView to set up, make changes, and measure ad campaigns entirely on their own. In a world where all TV ads will be automated and streamed, our software and machine learning provide the best way to reach a Roku user wherever they are — on the Roku platform, other TV streaming devices, desktop, mobile, and more. Advertisers choose OneView because it is the only ad buying platform with Roku data, ad inventory from The Roku Channel, and new Roku ad experiences that go beyond the traditional TV ad spot.

We offer engagement analytics such as ad impressions served, click-through rates, and video completion rates. We work with a wide variety of third-party measurement companies to measure the branding impact of the ads served and audience demographics, validate ad effectiveness, and quantify sales lift from advertising on our platform. 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 ads served on our platform to advertising on traditional TV. Additional promotional advertising opportunities include shoppable ads that allow consumers to buy products right from the TV screen and content sponsorships that give users the opportunity to experience a free movie or show and sponsored themes in our user experience.

Business Growth

Investment in Growth

We believe that our future performance will depend on the success of the investments in our business that we have made, and will continue to make, to further differentiate our platform and increase the value we deliver to our users, content publishers, and advertisers. We must regularly update and enhance our platform to meet evolving consumer behavior and provide a best-in-class content delivery and advertising platform. We must 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. Accordingly, we plan to continue investing in our business to enhance our competitive differentiation and drive future growth, but we also plan to continue to improve our operations and operating expense profile to better manage through the challenging macroeconomic environment. As a result, we expect our operating expense year-over-year growth to significantly decline over the course of 2023. In particular, these investments will include research and development initiatives to bring new features and technology to our platform; sales and marketing efforts to drive increased scale and engagement of our user base; continued investment in both licensed and original content to drive scale and engagement of The Roku Channel; and building out our general and administrative infrastructure to support a global business.

Advertising Innovation

We continue to innovate and launch new ad products. In 2022, we launched Roku's Advertising Watermark, an industry-first capability which enables content publishers, advertisers, and technology providers to validate the authenticity of videos ads on the Roku platform. In partnership with Walmart, we launched a product called Shoppable Ads, which make shopping on TV streaming as easy as it is on social media. Viewers simply press "OK" with their

Roku remote on a shoppable ad and proceed to checkout with their shipping and payment details pre-populated from Roku Pay. We also announced an industry-first collaboration with Microsoft that will quantify how TV advertising on both traditional TV and TV streaming affects online searches to help marketers measure performance. We launched Nielsen Total Ad Ratings, which provides media measurement across TV streaming, traditional TV, desktop, and mobile. OneView was the first demand-side ad platform to directly integrate with Nielsen's measurement solution.

International Markets

The shift from traditional TV to TV streaming is a global phenomenon, as it offers consumers better choice and greater control over their entertainment. We believe that the value our business delivers to consumers, content publishers, advertisers, licensed Roku TV partners, other device licensees, and retailers is as compelling in international markets as it is in the United States. Today Roku streaming devices are available in 20+ countries. We are the leading TV streaming platform in the United States, Mexico, and Canada by hours streamed. We continue to build our foundation for international expansion by establishing teams and offices around the world and investing in systems and processes that will support international expansion going forward. In 2022, licensed Roku TV partners launched new Roku TV models in Mexico, Canada, and Germany, and we expanded into Australia with Roku TV models. In international markets, we will continue to focus on building scale first, increasing customer engagement, and ultimately driving monetization.

Sales and Marketing

We engage in a wide variety of sales and marketing activities to continuously drive active account growth, engagement, and monetization and dedicate significant resources to this area. Our sales and marketing activities are primarily focused on building and expanding relationships with content publishers, advertisers, TV brands, retailers, and service operators, and driving sales of our products and our licensed Roku TV partners' products to consumers through retail distribution channels.

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 among content publishers, advertisers, TV brands, and service operators. 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. Our relationship with content publishers is typically client-direct. Through our dedicated content relationship management team, we enter into agreements with content publishers to distribute their app(s) on our platform, or license their content for The Roku Channel, or both. As part of our distribution agreements with AVOD channels, we typically secure direct access to the content publishers' video ad inventory for our monetization, and our sales efforts are differentiated and complementary to that of our content publishers. Whereas our publishers typically feature their brand and content in their sale, we focus on delivering a large streaming audience across many channels at once using our own data. We sell advertising to a wide range of advertisers helping them reach their goals across numerous key performance indicators. We are also developing relationships with more third-party platforms (e.g., retail media networks, demand side platforms, and other strategic partners) to reach marketers buying programmatic advertising on such platforms and to create demand opportunities for Roku ad inventory. Our sales teams and products are organized into groups that specialize in the unique needs of each area: (i) agency holding companies and Fortune 500 brands, (ii) independent agency and mid-market clients, (iii) content publishers and entertainment brands, (iv) performance and direct to consumer brands, (v) international markets, and (vi) local advertising. In addition, we work with our licensed Roku TV partners to assist in all phases of the development of Roku TV models, including development, planning, manufacturing, and marketing.

In the United States, the majority of our products and our licensed Roku TV partners' products 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, and to a lesser extent our website (excluding Roku TV models). We also sell products internationally through distributors and to retailers. Amazon and Walmart collectively accounted for 59% of our devices revenue for the year ended December 31, 2022 and 57% of our devices revenue for the year ended December 31, 2021. 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. We intend to continue to invest significant resources in our sales and marketing efforts.

Seasonality

We have historically seen seasonality in our business related to advertising and device sales. 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 seasons. Furthermore, in preparation for the fourth quarter holiday season, we recognize significant discounts in the average selling prices of our streaming device sales through retailers in an effort to grow our active accounts, which typically reduce our devices gross margin or results in a devices gross loss in the fourth quarter.

Research and Development

Our research and development model relies on 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, audio products, TVs, smart home devices, features, and functionality. We work closely with content publishers, advertisers, licensed Roku TV partners, 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 enhance our platform and capabilities.

Manufacturing

We outsource the manufacturing of our products to our contract manufacturers and original design manufacturers. All of our products are manufactured in the People's Republic of China, Southeast Asia, and Brazil. Our contracts do not obligate them to supply products to us in any specific quantity or at any specific price. Our manufacturers procure components and assemble our products to demand forecast we establish based upon historical trends and analysis from our sales, operations, and product management functions. The manufacturers ship our products to our third-party warehouses in the United States, the United Kingdom, Germany, and Brazil where we ship our products directly to retailers, wholesale distributors, and consumers.

Government Regulation

Our business and our products and platform are subject to numerous U.S. federal, U.S. state, 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 internet-connected devices.

For example, in both the United States and abroad, the regulatory framework for privacy and data security issues is rapidly evolving. U.S. federal and state consumer protection regulators generally exercise oversight of consumer privacy protections and the security of online services. And an increasing number of states have passed, or are considering, legislation to govern consumer privacy; the U.S. Congress also is considering comprehensive federal privacy legislation. Likewise, foreign jurisdictions in which we operate impose different, and sometimes more stringent, consumer and privacy protections, compared to the United States. Consumer privacy laws are constantly changing and may become more diverse and restrictive over time, increasing the challenges and costs associated with complying 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.

In addition, the internet is a vital component of our business and is subject to a variety of laws and regulations in jurisdictions throughout the world. We historically have relied on the openness and accessibility of the internet to conduct our business, and government regulations that impede the preservation of the open internet could harm our business. Regulators in the United States and abroad continue to evaluate policy changes that could affect the openness of the internet.

To the extent regulators 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.

Finally, our content business is subject to a wide range of government regulations that may vary by jurisdiction. Some nations highly regulate media, including TV streaming. Others have (or may consider) regulations that mandate certain local content quotas or production requirements, for cultural preservation or other reasons. Because our business depends on the creation and production of content, and on the availability of third-party content, delivered over the internet, increased regulation of TV streaming or changes in laws or regulations governing internet

transmission of content could adversely affect our business and the attractiveness of our platform. Additionally, these kinds of regulations may make operating in certain jurisdictions more expensive or restrictive.

New laws and regulations, individually or in the aggregate, could increase our cost of doing business, impact our competitive position, or otherwise have an adverse effect on our business. The costs of compliance with these laws and regulations are substantial and are likely to increase in the future. Compliance with existing or future laws and regulations, including, but not limited to, those pertaining to internet and online services, data privacy and security, consumer protection, global trade, environmental protection, employee health and safety, and taxes, could have an adverse impact on our business in subsequent periods. If we fail to comply with these laws and regulations, we may be subject to significant liabilities and other penalties as well as harm to our reputation. For additional information about government regulation applicable to our business and associated risks, see Item 1A, Risk Factors, elsewhere in this Annual Report.

Intellectual Property

Our success depends in part upon our ability to protect our core technology and intellectual property. To establish and protect our proprietary rights, we rely on a combination of intellectual property rights, including patents, trademarks, copyrights, trade secret laws, license agreements, confidentiality procedures, employee disclosure and invention assignment agreements, and other contractual rights.

As of December 31, 2022, we had approximately 1,000 issued patents and 500 pending applications in the United States and foreign countries. We also license technology from third parties when we believe it will facilitate our product offerings or business. For information about the intellectual property risks applicable to our business, see Item 1A, Risk Factors, elsewhere in this Annual Report.

Competition

The TV streaming industry is highly competitive and, as it continues to evolve, we will continue to face strong competition in every aspect of our business. We compete with much larger companies which have resources and brand recognition that pose significant competitive challenges. In the face of this competition, we believe our success depends on building scale by growing our active accounts, growing engagement by increasing the hours of content streamed through our platform, and growing the monetization of the activities that consumers engage in through our platform.

Our competitors include:

- companies that offer TV streaming devices that compete with Roku streaming devices and companies that license their operating systems for integration into smart TVs and other streaming products;
- TV brands that offer their own TV streaming solutions within their TVs as well as other devices such as game consoles, DVD players, Blu-ray players, and set-top boxes that leverage their own operating systems;
- mobile streaming platforms that enable users to stream content on phones and tablets;
- companies that produce and aggregate TV streaming content with the goal of attracting wide audiences;
- companies that offer advertisers the opportunity to reach consumers on other content and advertising mediums;
- companies that offer users other sources for news and entertainment, including broadcast and cable television networks, newspapers and magazines, social networks, and video games;
- companies that offer smart home products that compete with our new smart home products and services; and
- companies that operate in the same locations as our offices that may be better able attract and retain top talent in engineering, research and development, sales and marketing, operations, and other organizations.

We also compete with other entertainment providers, including other TV streaming companies and content publishers, in seeking high quality content to license for our platform and for talent and programming concepts for original content projects.

As the TV streaming market continues to develop, we may become subject to additional competition as we introduce or develop new products and services, as our existing products and services evolve, or as other companies introduce competing products and services.

Human Capital Management

We believe our success depends on our culture and our ability to attract and retain our employees. As of December 31, 2022, we employed approximately 3,600 full-time employees located in 14 countries. Only our employees in Brazil are represented by a labor union with respect to their employment. The majority of our employees have adopted a hybrid work schedule (consisting of both in-person work and working from home).

Culture

We want our employees to be proud to work at Roku. Our entrepreneurial, execution-focused culture emphasizes recruiting talented individuals, encouraging teamwork, and expecting our employees to perform at a high level. Across Roku, teams are expected to communicate clearly, in real time. Because our employees are trusted and encouraged to make decisions, our leadership communicates plans, milestones, and strategic context broadly, and our employees are trusted to maintain the confidentiality of such information. Our employees are encouraged to use our broad talent base for diverse points of view when making decisions. As we grow our business, our goal is to ensure that Roku continues to be a great place to work and thrive.

Diversity, Equity and Inclusion

We are committed to being a diverse and inclusive organization. Since 2020, the launch of our formal diversity, equity, and inclusion (“DEI”) strategy, we have made considerable progress on elevating awareness of DEI, promoting dialogue and empathy, implementing employee resource groups, and expanding representation on The Roku Channel and the Roku platform.

Our Vice President of Global Talent Management and Inclusion leads our growing Inclusion Strategy team with a director of DEI and two program managers. We also have full-time resources embedded in our Talent Acquisition team. They partner across Roku to advance DEI across our employee experience, recruiting, and customer experience. These areas comprise our three-part DEI framework: Inclusive Employee Experience, Inclusive Recruiting, and Inclusive Customer Experience.

Inclusive Employee Experience: We facilitate an inclusive employee experience through our pay equity analysis, learning and development offerings, internal and external communications, employee resource groups (“ERG”), and mentoring. In 2022, we continued our U.S. pay equity analysis to help ensure we pay fairly and equitably across gender and ethnicity, year over year. Our six voluntary and employee-led ERGs are highly engaged and foster a diverse and inclusive workplace, build internal community, encourage career growth and networking, and support social impact partnerships. In 2022, we delivered a significant rollout of DEI offerings in the areas of bias, inclusive conversations, allyship, and subtle acts of exclusion. We also increased the frequency of DEI communications to amplify our commitment, both internally and externally.

Inclusive Recruiting: Our Inclusive Recruiting Program Manager and DEI specialists embedded within our Talent Acquisition team directly contribute to our efforts to be inclusive. In addition, every member of our Talent Acquisition team is trained on how to source, engage, and recruit candidates from different backgrounds. To that end, all recruiters are equipped to discuss DEI best practices with hiring managers to ensure we continue to widen the candidate pipeline for all roles and create inclusive recruiting experiences. Furthermore, our U.S. university recruiting and intern programs embed DEI into their strategies so that our recruiting pipelines include historically black colleges and universities, Hispanic-serving institutions, and underrepresented clubs and programs across other schools where we recruit.

Our external relationships are also focused on organizations that reflect underrepresented communities, including technical and non-technical women and underrepresented minority organizations, to enable our hiring managers and recruiters to attend or speak at related conferences, share our job descriptions, and tell our employer brand story to a wider audience.

Inclusive Customer Experience: As a TV streaming platform with both U.S. and international viewers, we believe our customer experiences should reflect the diversity of our customers. We offer a slate of “inclusion zones” (including Black Voices, Pride, Latino Voices, Women’s Voices, and Asian and Pacific Islander Voices) on the Roku platform that highlight and celebrate related stories from various content providers.

Community Engagement and Social Impact

We have developed a Social Impact program that engages our local communities through employee volunteerism. Our program partners with organizations that provide opportunities for employees to mentor high school students through activities such as career panels, industry masterclasses, and hands-on science, technology, engineering, and math (STEM) challenges.

Learning and Talent Development

Our Learning and Talent Development function provides our employees with the training and development needed to support our strategic priorities and growth. Our employee development programs begin with a comprehensive new hire onboarding experience covering our culture, business, and the resources employees need to increase our new hires' speed to productivity. In addition to mandatory training covering anti-harassment, anti-discrimination, and privacy, we offer employees a suite of highly encouraged training offerings covering topics such as high-performance feedback, active listening, and communication and presentation skills. Managers are provided with training on expectations for managers, interviewing and hiring, and performance management to support new and newly promoted leaders in managing and leading effectively. In addition, all employees have access to on-demand technical and non-technical skill development through LinkedIn Learning. We intend to continue to review, refresh, purchase, and custom-build additional training materials to support our global employees' performance and development needs.

Compensation and Benefits

Our total compensation program is designed to attract, retain, and reward talented professionals. As a result, we endeavor to pay competitive total compensation that is guided by market rates and tailored to account for the specific needs and responsibilities of a particular position as well as the unique qualifications of the individual employee. In determining each employee's total compensation, we consider what they would be paid by another employer, what we would have to pay to replace them if they leave Roku, and the amount we would pay to retain them. Generally, we pay employees total compensation that is comprised of salary and equity awards rather than offering specific benefits or perks that might be valued differently by different employees. We generally do not pay cash bonuses (other than to employees eligible for sales commissions) or have performance-based equity awards because our employees are expected to work at the highest level regardless of possible bonus payouts or awards.

We recognize that our employees are most likely to thrive when they have the resources to meet their needs and the time and support to succeed in their professional and personal lives. In support of this, we offer a variety of benefits and wellness offerings to employees around the world.

Available Information

Our website address is www.roku.com. 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 Exchange Act, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the SEC. Investors and others should note that we announce material financial information to our investors using our investor relations website (roku.com/investor), SEC filings, webcasts, press releases, and conference calls. We use these mediums to communicate with investors and the general public about our company, our products and services, and other issues. It is possible that the information we make available may be deemed to be material information. We therefore encourage investors, the media, and others interested in our company to review the information we post on our investor relations website.

The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Information contained on or accessible through the websites listed above is not incorporated by reference nor otherwise included in this Annual 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, 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. In addition, you should consider the interrelationship and compounding effects of two or more risks occurring simultaneously. 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. You should not interpret our disclosure of any of the following risks to imply that such risks have not already materialized.

Risk Factors Summary

Below is a summary of the principal factors that make an investment in our Class A common stock speculative or risky:

Risks Related to Our Business and Industry

- the highly competitive nature of the TV streaming industry that is rapidly evolving;
- the acceptance and growth of over-the-top advertising and advertising platforms;
- our ability to further monetize our streaming platform;
- our ability to attract advertisers and advertising agencies to our demand-side advertising platform;
- our ability to develop, maintain, and expand relationships with licensed Roku TV partners, manufacturing partners, and service operators;
- our ability to establish and maintain relationships with important content publishers;
- popular or new content publishers not publishing their content on our streaming platform;
- the non-renewal or early termination of our agreements with content publishers;
- maintaining an adequate supply of quality video ad inventory on our platform and selling the available supply;
- content publishers electing not to participate in platform features that we develop;
- irrelevant or unengaging advertising or media and entertainment promotional spending campaigns on our platform;
- our operation of The Roku Channel;
- users signing up for offerings and services outside of our platform;
- the evolution of our industry and the impact of many factors that are outside of our control;
- our and our licensed Roku TV partners’ reliance on retail sales channels to sell products;
- our ability to build a strong brand and maintain customer satisfaction and loyalty;
- advertiser or advertising agency delayed payment or failure to pay;
- maintaining adequate customer support levels;
- our introduction of new products and services;
- our and our licensed Roku TV partners’ reliance on contract manufacturers and limited manufacturing capabilities;
- our reliance on licensed Roku TV partners’ operations for the supply of Roku TV models;
- our ability to forecast manufacturing requirements and manage our supply chain and inventory levels;
- decreased availability or increased costs for materials and components used in the manufacturing of our products and our licensed Roku TV partners’ products;
- our ability to obtain key components from sole source suppliers;
- interoperability of our products with content publishers’ and other third parties’ offerings, technologies, and systems;
- detecting hardware defects and software errors in our products before they are released to end users;
- component manufacturing, design, or other defects that may render our products permanently inoperable;
- our ability to obtain or maintain necessary or desirable third-party technology licenses;

Risks Related to Operating and Growing Our Business

- our history of operating losses;
- volatility of our quarterly operating results that could cause our stock price to decline;
- our ability to manage our growth;

- our ability to successfully expand our international operations;
- seasonality of our business and its impact on our revenue and gross profit;
- attracting and retaining key personnel and managing succession;
- maintaining systems that can support our growth, business arrangements, and financial rules;
- our ability to successfully complete acquisitions and investments and integrate acquired businesses;
- our ability to comply with the terms of our outstanding credit facility;
- our ability to secure funds to meet our financial obligations and support our planned business growth;

Risks Related to Cybersecurity, Reliability, and Data Privacy

- significant disruptions of information technology systems or data security incidents;
- legal obligations and potential liability or reputational harm related to the protection of personal and confidential information;
- disruptions in computer systems or other services that result in a degradation of our platform;
- changes in how network operators manage data that travel across their networks;

Risks Related to Intellectual Property

- intellectual property infringement claims and litigation resulting in significant costs or the loss of important intellectual property rights;
- failure or inability to protect or enforce our intellectual property or proprietary rights;
- our use of open source software;
- our agreements to indemnify certain of our partners if our technology is alleged to infringe on third parties' intellectual property rights;

Risks Related to Macroeconomic Conditions

- the impact of supply chain disruptions, inflationary pressures, recessionary fears, the COVID-19 pandemic, natural disasters, geopolitical conflicts, or other natural or man-made catastrophic events on our business;

Legal and Regulatory Risks

- enactment of or changes to government regulation or laws related to our business;
- changes in U.S. or foreign trade policies, geopolitical conditions, and general economic conditions that impact our business;
- U.S. or international rules (or the absence of rules) that permit internet access network operators to degrade users' internet service speeds or limit internet data consumption by users;
- liability for content that is distributed through or advertising that is served through our platform;
- our ability to maintain effective internal controls over financial reporting;
- the impact of changes in accounting principles;
- compliance with laws and regulations related to the payment of income taxes and collection of indirect taxes;
- changes to U.S. or foreign taxation laws or regulations;
- regulatory inquiries, investigations, and proceedings;

Risks Related to Ownership of Our Class A Common Stock

- the dual class structure of our common stock;
- volatility in the market price of our Class A common stock;
- potential dilution or a decline in our stock price caused by future sales or issuance of our capital stock or rights to purchase capital stock;
- a decline in our stock price caused by future sales by existing stockholders;
- dependency on favorable securities and industry analyst reports;
- the significant legal, accounting, and other expenses associated with being a publicly traded company;
- the absence of dividends on our Class A or Class B common stock;
- anti-takeover provisions in our charter and bylaws; and
- the limitations resulting from our selection of the Delaware Court of Chancery and the U.S. federal district courts as the exclusive forums for substantially all disputes between us and our stockholders.

Risks Related to Our Business and Industry

The TV streaming industry 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.

The TV streaming industry is highly competitive and global. Our success depends in part on attracting users to and retaining users on, and the effective monetization of, our streaming platform. To attract and retain users, we need to be able to respond efficiently to changes in consumer tastes and preferences and to offer our users access to the content they love on terms that they accept. Effective monetization requires us to continue to update the features and functionality of our streaming platform for users, content publishers, and advertisers. We also must effectively support popular sources of streaming content that are available on our platform, such as Amazon Prime Video, Disney+, Netflix, and YouTube. And we must respond rapidly to actual and anticipated market trends in the TV streaming industry.

Large technology companies such as Amazon, Apple, and Google offer TV streaming devices that compete with Roku streaming devices. In addition, Google licenses its Android 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 and sells Amazon-branded smart TVs. These companies have greater financial resources than we do and can subsidize the cost of their streaming devices or licensing arrangements in order to promote their other products and services, which could make it harder for us to acquire new users, retain existing users, and increase streaming hours. These companies could also implement standards or technology that are not compatible with our products or that provide a better streaming experience. These companies also have greater resources to promote their brands through advertising than we do.

In addition, many TV brands offer their own TV streaming solutions within their TVs. Other devices, such as game consoles, also incorporate TV streaming functionality. Similarly, some service operators, such as Comcast, offer TV streaming applications and devices 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 alternative products to Roku streaming devices, we may not be able to achieve our expected growth in active accounts, streaming hours, revenue, gross profit or ARPU.

We also compete for streaming hours with mobile streaming applications on smartphones and tablets, and users may prefer to view streaming content on such applications. Increased use of mobile or other platforms for TV streaming could adversely impact the growth of our streaming hours, harm our competitive position, and otherwise harm our business.

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 Roku streaming devices, our platform or our other products to gain or maintain broad market acceptance. To remain competitive and maintain our position as a leading TV streaming platform, we need to continuously invest in our platform, product development, marketing, service and support, and device distribution infrastructure. In addition, evolving TV standards and unknown future developments may require further investments in the development of Roku streaming devices, our platform and our other products. 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, sales, and distribution of their products or 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 sales volume, revenue, and operating margins, increase our operating costs, harm our competitive position, and otherwise harm our business.

To enhance our users' experience, we also offer audio products, including Roku Streambars, Roku wireless speakers, and Roku wireless subwoofers, and Roku smart home products, including indoor and outdoor cameras, video doorbells, smart lighting, and smart plugs. As a result, we may face additional competition from makers of TV audio speakers and soundbars and other TV peripheral devices, as well as makers of other smart home products. If these products do not operate as designed or do not enhance the TVs powered by Roku OS or other viewing experiences as we intend, our users' overall viewing experience may be diminished, and this may impact the overall demand for our products and our partners' Roku TV models.

Our future growth depends on the acceptance and growth of over-the-top (“OTT”) advertising and OTT advertising platforms.

We operate in a highly competitive advertising industry and compete for revenue from advertising with other streaming platforms and services, including social media and other digital platforms, 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 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. For example, Netflix and Disney+ recently launched ad-supported tiers in their streaming services, which may further increase competition for streaming advertising revenue. If we are unable to increase our revenue from advertising by, among other things, continuing to improve our platform’s capabilities to further optimize and measure advertisers’ campaigns, increasing our advertising inventory, and expanding 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 would harm our business.

Many advertisers continue to devote a substantial portion of their advertising budgets to traditional advertising, such as traditional TV, radio, and print, and to advertising through social media and other digital platforms. The future growth of our business depends on the growth of OTT advertising and on advertisers increasing their spending on advertising on our platform. Although traditional TV advertisers have shown growing interest in OTT advertising, we cannot be certain that their interest will continue to increase or that they will not revert to traditional TV advertising or shift their advertising spending to social media and other digital platforms (rather than to us). In addition, if we are unable to compete with social media and other digital platforms to win business from advertisers and agencies who have traditionally advertised on these platforms, such as direct-to-consumer and small or medium-sized businesses, our ability to grow our business may be limited. If advertisers, or their agency relationships, do not perceive meaningful benefits of OTT advertising, the market may develop more slowly than we expect, which could adversely impact our operating results and our ability to grow our business.

Finally, there is political pressure in some countries to limit OTT advertising (including limiting the advertising that may be shown to viewers of children’s content) or impose local content requirements on OTT services, which could pose a threat to our services.

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 sale of digital advertising and related services, and content distribution services (such as subscription and transaction revenue shares, media and entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls). As such, we are seeking to expand the number of active accounts and increase the number of hours that are streamed across our platform in an effort to create additional platform revenue opportunities. 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. The total number of streaming hours, however, does not correlate with platform revenue on a period-by-period basis, primarily because we do not monetize every hour streamed or every user on our platform. Moreover, streaming hours on our platform are measured whenever a Roku streaming device is streaming content, whether a viewer is actively watching or not. For example, if a 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 continue to play 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. Since the first quarter of 2020, all Roku devices include a Roku OS feature that is designed to identify when content has been continuously streaming on a channel for an extended period of time without user interaction. This feature periodically prompts the user to confirm that they are still watching the selected channel and closes the channel if the user does not respond affirmatively. Some of our leading channel partners, including Netflix, also have similar features within their channels.

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 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, Apple TV+, Hulu, and YouTube, are focused on increasing user engagement and time spent within their channels by allowing users to purchase additional content and streaming services within their channels; when users purchase these additional services within these channels, we may earn less revenue than when the services are purchased directly from us. 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 our users opt out from our ability to collect data for use in providing more relevant advertisements, we may not be able to achieve our expected growth in platform revenue or gross profit. Additionally, our distribution agreements with our most popular channels are renegotiated periodically; thus, even if we are currently able to monetize streaming hours within a channel, we may not be able to do so in the future. If we are unable to further monetize our streaming platform, our business may be harmed.

Our efforts to monetize our streaming platform through ad-supported content are still developing and may not continue to grow as we expect, and our platform revenue growth has been, and may continue to be, lower than expected due to advertisers significantly curtailing or pausing advertising spending due to inflationary pressures, recessionary fears or other reasons that are out of our control. In addition, advertisers' spending commitments, such as those we obtain in connection with annual TV Upfront presentations, are typically not fully binding, and the revenue we receive from such commitments may be less than the initially committed amount. This means that in order to materially increase the monetization of our streaming platform through the sale of video advertising, we will need to attract significantly more advertising dollars to our streaming platform as well as deliver ad-supported content that results in our users streaming significantly more ad-supported content. Accordingly, there can be no assurance that we will be successful in monetizing our streaming platform through the distribution of ad-supported content.

If we are unable to attract advertisers or advertising agencies to our OneView ad platform or if we are not successful in running a demand-side advertising platform, our business may be harmed.

Through our OneView ad platform, advertisers and advertising agencies can programmatically purchase and manage their OTT, desktop and mobile advertising campaigns. OneView leverages the demand-side platform developed by dataxu, which we acquired in November 2019, and integrates the reach, inventory, and capabilities of our proprietary advertising products and services. The market for programmatic OTT ad buying is an emerging market, and our current and potential advertisers and advertising agencies may not shift to programmatic ad buying from other buying methods as quickly as we expect or at all. If the market for programmatic OTT ad buying deteriorates or develops more slowly than we expect, advertisers and advertising agencies may not use OneView or we may not attract prospective advertisers or advertising agencies to OneView, and our business could be harmed. In addition, if OneView does not have the functionality or services expected by advertisers or advertising agencies, we may not be able to attract their advertising spend to OneView, or our existing customers may not maintain or increase their spend on OneView. Moreover, our ownership of OneView may negatively impact the ability of OneView to purchase advertising on non-Roku platforms. If we fail to adapt to our rapidly changing industry or to our customers' evolving needs, advertisers and advertising agencies will not adopt OneView, and our business may be harmed. We also may not be able to compete effectively with more established demand-side platforms or be able to adapt to changes or trends in programmatic OTT advertising, which would harm our ability to grow our advertising revenue and harm our business.

Our growth depends in part on our ability to develop, maintain, and expand relationships with our licensed Roku TV partners and manufacturing partners in the United States and international markets and, to a lesser extent, service operators.

We have developed, and intend to continue to develop and expand, relationships with TV brand and manufacturing partners. We continue to invest in the growth and expansion of our Roku TV program both in the United States and international markets. In the past few years, the sale of Roku TV models by our licensed Roku TV partners has materially contributed to our active account growth, streaming hours, and platform monetization efforts. This growth has primarily been driven by North America; however, our Roku TV licensing program has been expanded to certain international markets and represents a growing share of new active accounts. We license the Roku OS and our smart TV reference designs to certain licensed Roku TV partners to manufacture Roku TV models. We do not typically receive, nor do we typically expect to receive, license revenue from these arrangements, but we expect to incur expenses in connection with these commercial agreements. 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, increasing streaming hours, and generating content distribution and advertising-related revenue on our platform. If these arrangements do not continue to result in increased active accounts and streaming hours, and if that growth does not in turn lead to successfully monetizing that increased user activity, our business may be harmed.

While we recently announced the launch of a new line of Roku-branded TVs (the Roku Select and Roku Plus Series TVs) that will be designed, made, and sold by us, the loss of a relationship with a licensed Roku TV partner in the near future could harm our results of operations, damage our reputation, increase pricing and promotional pressures from other partners and distribution channels, increase our marketing costs, and result in the loss of revenue. 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 these relationships, our ability to grow or maintain our business could be adversely impacted.

We have also developed licensing relationships with certain service operators, primarily in international markets; however, this program has been decreasing in scale in recent years, as we have shifted the focus of our international growth to the sale of Roku streaming devices and expanding our Roku OS licensing program with licensed Roku TV partners. Based on the decreasing scale of our licensing program for service operators, including termination of these relationships, we expect that the number of active accounts generated from this program will continue to decline, which may impact the overall growth rate of our active accounts in 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 or no control over the amount and timing of resources these entities dedicate to the relationship. In the past, our licensed Roku TV partners have failed to meet their forecasts and anticipated market launch dates for distributing Roku TV models, and they may fail to meet their forecasts or such launches in the future. If our licensed Roku TV partners or service operator partners fail to meet their forecasts or such launches for distributing licensed streaming devices or choose to deploy competing streaming solutions within their product lines, our business may be harmed.

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.

Historically, a small number of content publishers have accounted for a significant portion of the hours streamed on our platform. In the fiscal year ended December 31, 2022, the top three streaming services represented over 50% of all hours streamed in the period. If, for any reason, we cease distributing channels that have historically streamed a large percentage of the aggregate streaming hours on our platform, our streaming hours, our active accounts, or Roku streaming device sales may be adversely affected, and our business may be harmed.

If popular or new content publishers do not publish content on our platform, we may fail to retain existing users and attract new users.

We must continuously maintain existing relationships and identify and establish new relationships with content publishers to provide popular streaming channels, streaming channel features, and content. In order to remain competitive, we must consistently meet user demand for popular streaming channels, streaming channel features, and content, particularly as we launch new streaming devices, introduce new TVs powered by Roku OS, or enter new markets, including international markets. If we are not successful in helping our content publishers launch and maintain streaming channels and streaming channel features that attract and retain a significant number of users on our streaming 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 promote and market new and existing streaming channels;
- minimize launch delays of new and updated streaming channels; and
- minimize streaming platform downtime and other technical difficulties.

In addition, if service operators, including traditional TV providers, refuse to grant our users access to stream certain channels or only make content available on devices they prefer, our ability to offer a broad selection of popular streaming channels or content may be limited. If we fail to help our content publishers maintain and expand their audiences on our platform or their channels are not available on our platform, our business may be harmed.

The non-renewal or early termination of agreements with our content publishers may result in the removal of certain channels or channel features from our streaming platform and may harm our active account growth and engagement.

We enter into agreements with all our content publishers, which have varying terms and conditions, including expiration dates and rights to terminate under certain circumstances. Our agreements with content publishers generally have terms of one to three years and can be terminated before the end of the term by the content publisher under certain

circumstances, including if we materially breach the agreement, become insolvent, enter bankruptcy, commit fraud, or fail to adhere to the content publishers' security or other platform certification requirements.

Upon expiration of these agreements, we are required to re-negotiate and renew them in order to continue providing content from these content publishers on our streaming platform. We have in the past been unable, and in the future may not be able, to reach a satisfactory agreement with certain content publishers before our existing agreements have expired. If we are unable to renew such agreements on a timely basis on mutually agreeable terms, or if a content publisher terminates an agreement with us prior to its expiration, we may be required to temporarily or permanently remove certain channels or channel features from our streaming platform.

The loss of such channels or channel features from our streaming platform for any period of time may harm our business. More broadly, 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.

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

Our business model depends on our ability to grow video ad inventory on our streaming platform and sell it to advertisers. While The Roku Channel has historically served as a valuable source of video ad inventory for us to sell, there is no guarantee that it will continue to do so in the future. If The Roku Channel is unable to secure content that is appealing to our users and advertisers, or is unable to do so on terms that provide a sufficient supply of ad inventory at reasonable cost, our supply of video ad inventory will be negatively impacted. We are also dependent on our ability to monetize video ad inventory within other ad-supported channels on our streaming platform. We seek to obtain the ability to sell such inventory from the content publishers of such channels. We may fail to attract content publishers that generate a sufficient quantity or quality of ad-supported content hours on our streaming platform or fail to obtain access to a sufficient quantity and quality of ad inventory from the publishers of such content. Our access to video ad inventory in ad-supported streaming channels on our platform varies greatly among channels. Accordingly, we may not have access to a significant portion 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. Moreover, when existing SVOD services introduce new ad-supported tiers to their streaming services, we have in the past and in the future may not be able to reach agreement on access to video ad inventory on these tiers on mutually agreeable terms, or at all. 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 ad inventory at reasonable costs to keep up with demand, our business may be harmed.

If our content publishers do not participate in new features that we may introduce from time to time, our business may be harmed.

As our streaming 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 new home screen menu features or have imposed limits on our data gathering for usage within their channels. In addition, our streaming platform utilizes our proprietary Brightscript scripting language in order to allow our content publishers to develop and create channels on our streaming platform. If we introduce new features or utilize a new scripting language in the future, such a change may not comply with certain 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 key content publishers do not find our streaming platform simple and attractive to develop channels for, do not value and participate in all of the features and functionality that our streaming 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.

If the advertising and media and entertainment promotional spending campaigns on our platform are not relevant or not engaging to our users, our growth in active accounts and streaming hours may be adversely impacted.

We have made, and are continuing to make, investments to enable advertisers and content publishers to deliver relevant advertising and media and entertainment promotional spending campaigns to our users. Existing and prospective advertisers and content publishers may not be successful in serving ads and media and entertainment promotional spending 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 advertisers and content publishers 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, advertisers, and content publishers. If the advertising and media and entertainment promotional spending campaigns on our streaming platform are not relevant, overly intrusive or too frequent and impede the use of our platform, our users may stop using our platform, which will harm our business.

We are subject to various risks in connection with our operation of The Roku Channel.

We operate The Roku Channel, which offers ad-supported free access for users to a collection of films, television series, live linear television, and other content. We have incurred, and will continue to incur, costs and expenses in connection with the development, expansion, and operation of The Roku Channel, which we monetize primarily through advertising. For example, we previously acquired content rights, including rights to certain projects in development, from the mobile-first video distribution service known as Quibi, and announced that The Roku Channel would become the home of such content. In addition, we acquired the entities comprising the This Old House business, which own and produce the “This Old House” and “Ask This Old House” TV programs and operate related business lines, to further the growth strategy and ad-supported content offerings in The Roku Channel. We also commission original content that we own and distribute on The Roku Channel.

If our users do not continue to stream the ad-supported content we make available on The Roku Channel, we will not have the opportunity to monetize The Roku Channel through revenue generated from advertising. 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 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, or if the content we do secure rights to stream is ultimately not appealing to our users and advertisers, usage of The Roku Channel may decline, and our business may be harmed.

In addition, following the Quibi and This Old House transactions and the launch of our advertising brand studio, we are producing content for distribution on The Roku Channel and other platforms. We have limited experience producing content, and we may not be successful in doing so in a cost-effective manner that is appealing to our users and advertisers and furthers the growth of The Roku Channel. We also take on risks associated with content production, such as completion and key talent risk. 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 available content, our users may not stream content and view advertisements on The Roku Channel, and The Roku Channel may not generate sufficient revenue from advertising to be cost effective for us to operate. In addition, we distribute 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 or generating significant revenue from advertising through the distribution of The Roku Channel on such other streaming platforms.

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, including Premium Subscriptions on The Roku Channel, which allow our users to pay for content from various content publishers. If users reduce the degree to which they use our platform for these purchases or subscriptions for any reason, and instead increase the degree to which they pay for services directly with content publishers or by other means for which we do not receive attribution, 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 revenue we earn from these transactions is not always equivalent to the revenue we earn from sales of such additional services on a stand-alone basis through our platform. If users increase their spending on such in-channel transactions at the expense of stand-alone purchases through our platform, our business may be harmed.

We operate in a rapidly evolving industry that will be impacted by many factors that are outside of our control, which makes it difficult to evaluate our business and prospects.

TV streaming is a 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 (including mobile broadband internet access), the quality and reliability of broadband content delivery, broadband service providers' ability to control the delivery speed of different content traveling on their networks, the quality and reliability of new devices and technology, the cost for users relative to other sources of content, the quality and breadth of content that is delivered across streaming platforms, and other macroeconomic conditions. Accordingly, our growth and the future evolution of TV streaming as an industry, which is likely to impact our success, is dependent on many factors that are outside of our control.

We and our licensed Roku TV partners depend on retail sales channels to effectively market and sell our respective products, and if we or our partners fail to maintain and expand effective retail sales channels, we or our partners could experience lower product sales.

To continue to increase our active accounts, we must maintain and expand retail sales channels for our products and for the Roku products sold by our partners or licensees. The majority of our products and our licensed Roku TV partners' products 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.

We also sell certain products directly through our website and internationally through distributors and retailers such as Coppel in Mexico, Magazine Luiza in Brazil, and MediaMarkt in Germany. As we have only recently expanded to certain international markets, we may not have established a strong reputation or relationships with retailers for those markets as compared to our sales channels in the United States or our competitors in international markets. Amazon and Walmart in total accounted for 59% of our devices revenue for the fiscal year ended December 31, 2022, and 57% for the year ended December 31, 2021.

Our retailers and 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 products or our licensed Roku TV partners' products, choose not to prominently display those devices in their stores or on their websites, or close or severely limit access to their brick and mortar locations, the volume of our products or our licensed Roku TV partners' products sold could decrease, which would harm our business. If any of our existing licensed Roku TV partners choose to work exclusively with, or divert a significant portion of their business with us to, other operating system developers, this may adversely impact our ability to continue to license the Roku OS and our smart TV reference design to TV brands and our ability to continue to grow active accounts and monetize the Roku OS. 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, stronger brand identity and greater marketing resources, such as Amazon or Google, possesses greater bargaining power with retailers. In addition, one of our online retailers, Amazon, sells its own competitive streaming devices, smart TVs, and smart home devices, is able to market and promote these products more prominently on its website, and could refuse to offer or promote our products on its website. Any reduction in our ability to place and promote our products, or increased competition for available shelf or website placement, could require us to increase our marketing or other expenditures to maintain our product visibility or could result in reduced visibility for our products, 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 products 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. Certain factors, such as the quality or pricing of our products or our customer service, are within our control. Other factors, such as the quality and reliability of the Roku TV models made by our licensed Roku TV partners 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 may have greater resources to devote to the promotion of their brands through

traditional advertising, digital advertising or website product placement. If we are unable to execute on building a strong brand, it may be difficult to differentiate our business and streaming 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 users to choose from a wide variety of channels, representing a variety of content from a wide range of content publishers. Our users can choose and control which channels they download and watch, and they can use certain settings to prevent channels from being downloaded to Roku streaming 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 channels that we distribute have resulted in, and could in the future result in, negative publicity, cause harm to our reputation and brand, or subject us to claims and may harm our business.

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. In addition, typically, we are contractually required to pay advertising inventory data suppliers within a negotiated period of time, regardless of whether our advertisers or advertising agencies pay us on time, or at all. In addition, we typically experience slow payment cycles by advertising agencies as is common in the advertising industry. While we attempt to balance payment periods with our suppliers and advertisers and advertising agencies, we are not always successful. As a result, we can often face a timing issue with our accounts payable on shorter cycles than our accounts receivables, requiring us to remit payments from our own funds, and accept the risk of credit losses.

We may also be involved in disputes with agencies and their advertisers over the operation of our streaming platform, the terms of our agreements or our billings for purchases made by them through our streaming platform or through our demand-side platform. If we are unable to collect or make adjustments to bills, we could incur credit losses, 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.

The quality of our customer support is important, and if we fail to provide adequate levels of customer support, we could lose users, advertisers, content partners, and licensed Roku TV partners, which could harm our business.

Our users depend on our customer support organization to resolve issues relating to our products and our streaming platform. A high level of support is critical for the success of our business. We currently outsource the majority of our customer support operation to a third-party customer support organization which provides support to end users. In addition, we train our licensed Roku TV partners and service operator licensees to provide first-level customer support to users of Roku TV models. If we do not effectively train, update, and manage our third-party customer support organization to assist our users and licensees, 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 monetize our streaming platform, to sell our products to consumers and could harm our reputation with potential new customers and our licensees.

We must continue to innovate and develop new and existing products and services to remain competitive, and new products and services expose our business to new risks.

We must continually innovate and improve our products and services and develop new products and services to meet changing consumer demands. In particular, we recently introduced Roku Select and Roku Plus Series TVs (a new line of Roku-branded TVs that will be designed, made, and sold by us in 2023) and Roku smart home products (including indoor and outdoor cameras, video doorbells, smart lighting, and smart plugs) and related subscription services. The introduction of a new product or service is a complex task, involving significant expenditures in research and development, promotion, and sales channel development, and can expose our business to new risks. The introduction of new products and services or changes to our existing products and services may result in new or

enhanced governmental or regulatory scrutiny, new litigation or claims, or other complications that could adversely affect our business, reputation, or financial results. For example, we have faced and may continue to face new intellectual property infringement claims related to new products and services we have introduced. In addition, our entrance into entirely new lines of business beyond our historical core business of TV streaming and advertising, such as our launch of Roku smart home products, may change our risk profile and subject us to risks that differ from the risks we face as a result of our TV streaming business.

Whether users will broadly adopt our new products or services is not certain. Our future success will depend on our ability to develop new and competitively priced products and services and add new desirable content and features to our streaming platform. Moreover, we must introduce new products and services in a timely and cost-effective manner, and we must secure production orders for new products from our contract manufacturers. The development of new products and services 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 and services depends on a number of factors, including:

- 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;
- our ability to timely and adequately redesign or resolve design or manufacturing or security issues;
- our ability to identify and contract with an appropriate manufacturer;
- the ability of our contract manufacturers to cost-effectively manufacture our new products;
- the availability of materials and key components used in manufacturing;
- tariffs, trade, sanctions, and export restrictions by the U.S. or foreign governments, which could impact the pricing, timing and availability of new products and depress consumer demand, limit the ability of our contract manufacturers to obtain key parts, components, software, and technologies, and lead to shortages;
- the ability of our contract manufacturers to produce quality products and minimize defects, manufacturing mishaps, and shipping delays; and
- our ability to attract and retain world-class research and development personnel.

If any of these or other factors materializes, 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 our own manufacturing capabilities and primarily depend upon a limited number of contract manufacturers, and our operations could be disrupted if we encounter problems with our contract manufacturers.

We do not have any internal manufacturing capabilities and rely on a limited number of contract manufacturers to build our players, smart home products, and Roku-branded TVs. Our contract manufacturers are vulnerable to, among other issues:

- capacity constraints;
- reduced component availability;
- production, supply chain, or shipping disruptions or delays, including from labor disputes, strikes, mechanical issues, quality control issues, natural disasters, geopolitical conflicts, and public health crises; and
- the impact of U.S. or foreign tariffs, trade, or sanctions restrictions on components, finished goods, software, other products, or data transfers.

As a result, we have limited control over delivery schedules, manufacturing yields, and costs, particularly when components are in short supply or when we introduce new products.

We also have limited control over our contract manufacturers' quality systems and controls, and therefore must rely on them to manufacture our products to our quality and performance standards and specifications. Delays, component shortages, quality issues, and other manufacturing and supply problems have impaired, and could in the future impair, the retail distribution of our products and ultimately our brand. Furthermore, any adverse change in our contract manufacturers' financial or business condition could disrupt our ability to supply our products to our retailers and distributors.

We also rely upon our contract manufacturers and other contractors to perform some of the development work on our products. The contract manufacturers or other contractors may be unwilling or unable to successfully complete desired development or fix defects or errors in a timely manner. Delays in development work by contract manufacturers or contractors could delay launch of new or improved products.

Our contracts with our contract manufacturers generally may not contain terms that protect us against development, manufacturing, and supply disruptions or risks. For example, such contracts may not obligate our contract manufacturers to supply our products in any specific quantity or at any specific price. If our contract manufacturers are unable to fulfill our production requirements in a timely manner, if their costs increase because of inflationary pressures, U.S. or international tariffs, sanctions, export or import restrictions, or if they decide to terminate their relationship with us, our order fulfillment may be delayed or terminated, and we would have to attempt 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, to our quality and performance standards on a timely basis, or at all. Any significant interruption in manufacturing at our contract manufacturers for any reason could require us to reduce our supply of products to our retailers and distributors, which in turn would reduce our revenue, or incur higher freight costs than anticipated, which would negatively impact our devices gross margin.

In addition, our contract manufacturers' facilities, and the facilities of our contract manufacturers' suppliers, are located in various geographic areas that may be subject to political, economic, labor, trade, public health, social, and legal uncertainties, including Taiwan, Vietnam, China, and Brazil, and such uncertainties may harm or disrupt our relationships with these parties or their ability to perform. For example, if the current tensions between Taiwan and China escalate and impact the operations of our contract manufacturers and their Taiwanese suppliers, our supply chain and our business could be adversely affected. We believe that the international location of these facilities increases supply risk, including the risk of supply interruptions, tariffs, and trade restrictions on exports or imports.

The supply of Roku TV models to the market could be disrupted if our licensed Roku TV partners encounter problems with their internal operations or with their contract manufacturers, assemblers, or component suppliers.

Some of our licensed Roku TV partners have internal manufacturing capabilities, while others rely primarily or exclusively upon contract manufacturers to build the Roku TV models that our licensed Roku TV partners sell to retailers. Regardless of whether their manufacturing capabilities are internal or contracted, our licensed Roku TV partners' manufacturers may be vulnerable to capacity constraints and reduced component availability; increases in tariffs on imports of Roku TV models; future possible changes in regulations on exports: restrictions, by the United States or otherwise, on dealings with certain countries, companies, or imported inputs; tariffs on parts or components for Roku TV models; and supply chain disruptions and shipping delays.

Our licensed Roku TV partners' control over delivery schedules, manufacturing yields, and costs, particularly when components are in short supply, may be limited. For those licensed Roku TV partners with contract manufacturers or suppliers, the problems are exacerbated because the contract manufacturer is a third party, and the licensed Roku TV partner does not have direct visibility into or control over the operations. Delays, component shortages, and other manufacturing and supply problems could impair the manufacture or distribution of Roku TV models. Interruptions in the supply of Roku TV models to retailers and distributors or increases in the pricing of Roku TV models at times have negatively affected, and could adversely affect in the future, the volume of Roku TV models sold at retail, resulting in slower active account and streaming hour growth.

Furthermore, any manufacturing, design, or other issues affecting the quality or performance of Roku TV models could harm our brand and our business.

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

We bear risks of excess and insufficient inventories under our contract manufacturing arrangements. For example, our contract manufacturers order materials and components in advance in an effort to meet our projected needs for our products. Lead times for the materials and components that our contract manufacturers order on our behalf through different component suppliers may vary significantly and depend on numerous factors outside of our control, including the specific supplier, contract terms, shipping and freight, market demand for a component at a given time, and trade and government relations. Lead times for certain key materials and components incorporated into our products are currently lengthy and may require our contract manufacturers to order materials and components many months in advance. If we overestimate our production requirements, our contract manufacturers may purchase excess components and build excess inventory. If our contract manufacturers, at our request, purchase excess components or build excess products, we could be required to pay for these excess components or products. In the past, we have agreed to reimburse our contract manufacturers for purchased components that were not used as a result of our decision to discontinue a certain model or the use of particular components. If we incur costs to cover excess supply commitments, our business may be harmed.

Conversely, if we underestimate our product requirements, our contract manufacturers may have inadequate material or component inventory, which could interrupt the manufacturing of our products, result in insufficient quantities available to meet demand, 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 our products via air freight, which is more expensive than ocean freight, and adversely affected our devices 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 products incorporate key components from sole source suppliers, and if our contract manufacturers are unable to obtain sufficient quantities of these components on a timely basis, we will not be able to deliver our products to our retailers and distributors.

We depend on sole source suppliers for key components in our products. For example, each of our streaming players and TVs powered by Roku OS may utilize a specific system on chip (or SoC), Wi-Fi silicon product, and Wi-Fi front-end module, each of which may be available from only a single manufacturer and for which we do not have a second source.

Although this approach allows us to maximize product performance on lower cost hardware, reduce engineering development and 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, such as U.S. or foreign tariffs, war or other government or trade relations issues, other export or import restrictions on parts or components for finished products that are used in final assembly of their components (or on the finished products themselves), or shortages of key components.

There is also a risk that the strategic supplier may stop producing such components, cease operations, be acquired by or enter into exclusive arrangements with our competitors or other companies, put contract manufacturers on allocation because of semiconductor shortages, or become subject to U.S. or foreign sanctions or export control restrictions or penalties. Such suppliers have experienced, and may in the future experience, production, shipping, or logistical constraints arising from macroeconomic conditions or other circumstances, such as inflationary pressures, geopolitical conflict, and supply chain disruptions. Such interruptions and delays have in the past and may in the future force us to seek similar components from alternative sources, which may not always be available, and which may cause us to delay product introductions and incur air freight expense. Switching from a sole-source supplier may require that we adapt our software, and redesign our products to accommodate new chips and components, and may require us to re-qualify our products with regulatory bodies, such as the U.S. Federal Communications Commission (“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, including increases related to inflationary pressures;
- 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 products could adversely affect our ability to meet scheduled product deliveries to our retailers and distributors, result in lost sales and higher expenses, and harm our business.

If our products do not operate effectively with various offerings, technologies, and systems from content publishers and other third parties that we do not control, our business may be harmed.

The Roku OS is designed to perform using relatively low-cost hardware, which enables us to drive user growth via Roku streaming devices offered at a low cost to consumers. However, this hardware must be interoperable with all channels and other offerings, technologies, and systems from our content publishers, including virtual multi-channel video programming distributors, and other third parties. We have no control over these offerings, technologies, and systems beyond our channel certification requirements, and if Roku streaming devices 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 Roku streaming devices, we may be unable to increase active account growth and user engagement or may be required to increase our hardware costs, and our business will be harmed.

We plan to continue to introduce new products regularly, including, for example, our recently announced Roku-branded TVs, 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. The 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, we may not be able to offer certain products to all licensed Roku TV partners or we may not continue to offer certain channels. To continue to grow our active accounts and user engagement, we will need to prioritize development of Roku streaming devices to work better with new offerings, technologies, and systems, including our recently announced smart home products. If we are unable to maintain consistent operability of Roku streaming 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 Roku streaming devices. We may not successfully develop Roku streaming devices 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.

Our products are complex and may contain hardware defects and software errors, which could manifest themselves in ways that could harm our reputation and our business.

Our products and the products of our licensed Roku TV partners are complex and have contained and may in the future contain hardware defects or software errors. These defects and errors can manifest themselves in any number of ways in our products or our streaming platform, including through diminished performance, security vulnerabilities, data loss or poor quality, device malfunctions, or even permanently disabled products. Some errors may only be discovered after a product 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 software errors in the process of any such update.

The introduction of a serious software error could result in products becoming permanently disabled. We offer a limited warranty for our products, in accordance with applicable law, however, providing software updates, product support, and other activities could cause us to be responsible for issues with products for an extended period of time. Any defects discovered in our products 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 contracts with our end 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 products. In addition, if our insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business could be harmed.

Components used in our products may fail as a result of manufacturing, design, or other defects that were unknown to us or over which we have no control and may render our products permanently inoperable.

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

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

We utilize or enable certain industry standard and other commercially available technology in our products and streaming platform that is licensed by third parties. As we continue to introduce new features or improvements to our products and on our streaming 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 or maintain 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 products, streaming platform, and our business.

Risks Related to Operating and Growing Our Business

We have incurred operating losses in the past, and although we have achieved profitability in certain prior quarters, we expect to incur operating losses in the future and may not be able to achieve profitability again in the near term or at all.

We have incurred operating losses in the past, and we may incur operating losses in the future. Although we achieved profitability in certain prior quarters, we may not be able to achieve profitability again in the near term or at all. As of December 31, 2022, we had an accumulated deficit of \$588.0 million. We generally expect our operating expenses to increase in the future as we continue to expand our operations and invest in growth and new areas, although we expect operating expense year-over-year growth to significantly decline over the course of 2023. If our revenue and gross profit do not grow at a greater rate than our operating expenses, we may not be able to achieve profitability again. We expect our profitability to fluctuate 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.

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 or services, whether by established or new companies;
- our ability to retain and grow our active account base, increase engagement among new and existing users, and monetize our streaming platform;
- our ability to maintain effective pricing practices in response to the competitive markets in which we operate or other macroeconomic factors, such as increased taxes or inflationary pressures, such as those the market is currently experiencing, and our ability to control costs, including our operating expenses;
- our revenue mix, which drives gross profit;
- supply of advertising inventory on our advertising platform and advertiser demand for advertising inventory;
- seasonal, cyclical, or other shifts in revenue from advertising or product sales;
- the timing of the launch of new or updated products, channels, or features;
- the addition or loss of popular content or channels;
- the expense and availability of content to license or produce for The Roku Channel;
- the ability of retailers to anticipate consumer demand;
- an increase in the manufacturing or component costs of our products or partner-branded products;
- delays in delivery of our products or partner-branded products, or disruptions in our or our partners' supply or distribution chains; 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. Our devices segment (which generates revenue from the sale of streaming players, audio products, smart home products, and related accessories, and licensing arrangements with service operators and licensed Roku TV brand partners) has lower gross margins compared to our platform segment (which generates revenue from the sale of digital advertising and related services including the demand-side platform and content distribution services such as subscription and transaction revenue shares, media and entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls). Gross margins on our streaming players, audio products, and smart home products vary across models and can change over time as a result of product transitions, pricing and configuration changes, component costs, device 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 products, 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 devices gross margin in an effort to increase the number of active accounts and grow our gross profit. As a result, our devices revenue may not increase as rapidly as it has historically, or at all, and, unless we are able to continue to increase our platform revenue and grow the

number of active accounts, we may be unable to grow gross profit and our business will be harmed. For example, in the past, global supply chain disruptions have resulted in shipping delays, increased shipping costs, component shortages, and increases in component prices, which negatively affected our devices gross margin. If a reduction in gross margin does not result in an increase in our active accounts or an increase in our platform revenue and gross profit, our financial results may suffer, and our business may be harmed. In addition, our platform segment has experienced in the past, and may experience in the future, lower gross margins than we anticipate. If our platform gross margins are lower than we anticipate, our financial results may suffer, and our business may be harmed.

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

We have experienced significant growth in our research and development, sales and marketing, support services, operations, and general and administrative functions 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 internationally;
- increase our sales and marketing efforts;
- expand the capacity to manufacture and distribute our products;
- broaden our customer support capabilities;
- expand our product offerings;
- support our licensed Roku TV partners and service operators;
- expand and improve the content offering on our platform;
- implement appropriate operational and financial systems; and
- maintain effective financial disclosure controls and procedures.

If we fail to manage our growth effectively, including if we grow our business too rapidly, we may not be able to execute our business strategies, which could harm our business and adversely affect our financial condition, results of operations, or cash flows. For example, in November 2022, we approved a workforce reduction plan designed to improve operational efficiencies and operating costs and better align our workforce with current business needs, priorities, and near term growth expectations. If we are unable to manage our growth and expansion plans effectively, which may be impacted by factors outside of our control, our business, operating results, and financial condition could be adversely affected.

We may be unable to successfully expand our international operations, and 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, licensing, and supporting our products and running or monetizing our streaming platform outside the United States. In addition, we have limited experience managing the administrative aspects of a global organization. While we intend to continue to explore opportunities to expand our business in international markets in which we see compelling opportunities, we may not be able to create or maintain international market demand for our products and streaming platform services. Moreover, we face intense competition in international markets, especially because some of our competitors have already successfully introduced their products into new markets we are entering and have greater experience managing a global organization.

In the course of expanding our international operations, we are subject to a variety of risks that could adversely affect our business, including:

- differing legal and regulatory requirements in foreign jurisdictions, including country-specific laws and regulations pertaining to data privacy and data security, consumer protection, tax, telecommunications, trade (including tariffs, quotas, and sanctions), labor, environmental protection, censorship and other content restrictions, and local content and advertising requirements, among others;
- exposure to increased corruption risk and compliance with laws such as the Foreign Corrupt Practices Act, UK Bribery Act, and other anti-corruption laws, U.S. or foreign export controls and sanctions, and local laws prohibiting improper payments to government officials and requiring the maintenance of accurate books and records and a system of sufficient internal controls;
- slower consumer adoption and acceptance of streaming devices and services in other countries;

- different or unique competitive pressures as a result of, among other things, competition with other devices that consumers may use to stream TV or existing local traditional TV services and products, including those provided by incumbent TV service providers and local consumer electronics companies;
- greater difficulty supporting and localizing Roku streaming devices and our streaming platform, including delivering support and training documentation in languages other than English;
- our ability to deliver or provide access to popular streaming channels or content to users in certain international markets;
- availability of reliable broadband connectivity in areas targeted for expansion;
- challenges and costs associated with staffing and managing foreign operations;
- differing legal and court systems, including limited or unfavorable intellectual property protection;
- unstable political and economic conditions, social unrest, or economic instability, whatever the cause, including due to pandemics, natural disasters, wars, terrorist activity, foreign invasions (such as the Russian invasion of Ukraine), tariffs, trade disputes, local or global recessions, diplomatic or economic tensions (such as the tension between China and Taiwan), long-term environmental risks, or climate change;
- adverse tax consequences, such as those related to changes in tax laws (including increased tax rates, the imposition of digital services taxes, and the adoption of global corporate minimum taxes and anti-base-erosion rules), changes in the interpretation of existing tax laws, and the heightened scrutiny by tax administrators of companies that have cross-border business activities;
- the imposition of customs duties on cross-border data flows for streaming services, in the event that the World Trade Organization fails to extend the current moratorium on such duties;
- any pandemics or epidemics, which could result in decreased economic activity in certain markets, changes in the use of our products or platform, or decreased ability to import, export, ship, or sell our products to supply such services to existing or new customers in international markets;
- inflationary pressures, such as those the global market is currently experiencing, which may increase costs for materials, supplies, and services;
- fluctuations in currency exchange rates, which could impact the revenue and expenses of our international operations and expose us to foreign currency exchange rate risk (see the section titled “Foreign Currency Exchange Rate Risk” in Part II, Item 7A of this Annual Report for additional information);
- restrictions on the repatriation of earnings from certain jurisdictions; and
- working capital constraints.

In addition, we may face challenges in successfully deploying our business model in international markets. Three core areas of focus define our business model: first, we grow scale by increasing our active accounts; second, we grow engagement by increasing the hours of content streamed through our platform; and, third, we grow monetization of the activities that consumers engage in through our platform. Even if we are able to increase our active accounts in international markets, we may be unable to effectively grow our streaming hours or monetize user activity in those markets. Further, our ARPU may be lower in international markets than 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.

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 seasons. Furthermore, in preparation for the fourth quarter holiday season, we recognize significant discounts in the average selling prices of our products through retailers in an effort to grow our active accounts, which typically reduce our devices gross margin in the fourth quarter.

Given the seasonal nature of advertising and our product 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 a decline in the effectiveness of our promotional activities, actions by our competitors, reductions in consumer discretionary spending, curtailed advertising spending, disruptions in our supply or distribution chains, tariffs or other restrictions on trade, shipping or air freight delays, or for any other reason, would cause our full year results of operations to suffer significantly. For example, in the quarter ended December 31, 2022, macroeconomic uncertainties and inflationary pressures negatively affected consumer electronics sales during the holiday season. In addition, delays or disruptions at U.S. ports of entry have in the past, and may in the future, adversely affect our or our licensed Roku TV partners’ ability to timely deliver products to retailers during holiday seasons.

A substantial portion of our expenses are personnel-related (including salaries, stock-based compensation, and benefits) and facilities-related, none of which are seasonal in nature. Accordingly, in the event of a revenue shortfall, we would be unable to mitigate the negative impact on gross profit and operating margins, at least in the short term, and our business would be harmed.

If we fail to attract and retain key personnel, effectively manage succession, or hire, develop, and motivate our employees, we may not be able to execute our business strategy or continue to grow our business.

Our success depends in large part on our ability to attract and retain key personnel on our senior management team and in our engineering, research and development, sales and marketing, operations, and other organizations. 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 products and streaming platform, our culture, and our strategic direction. We do not have long-term employment or non-competition agreements with any of our key personnel. The loss of one or more of our executive officers or the inability to promptly identify a suitable successor to a key role could have an adverse effect on our business.

Our ability to compete and grow depends in large part on the efforts and talents of our employees. Labor is subject to external factors that are beyond our control, including our industry's highly competitive market for skilled workers and leaders, cost inflation, workforce participation rates, and unstable political conditions. Our employees, particularly engineers and other product developers, are in demand, and we devote significant resources to identifying, hiring, training, successfully integrating, and retaining these employees. Because we face significant competition to attract top talent, we have had to offer, and believe we will need to continue to offer, competitive compensation packages before we can validate the productivity of those employees. In addition, many companies now offer a remote or hybrid work environment, which may increase the competition for employees from employers outside of our traditional office locations. To retain employees, we have in the past and may in the future need to increase our employee compensation levels or other benefits in response to competition and other business and macroeconomic factors. The loss of employees or the inability to hire additional skilled employees necessary to support our growth could result in significant disruptions to our business, and the integration of replacement personnel could be time-consuming and expensive and cause disruptions.

We believe a critical component to our success and our ability to retain our best people is our culture. As we continue to grow, we may find it difficult to maintain our entrepreneurial, execution-focused culture. In addition, any workforce reduction, such as the reduction we announced in November 2022, could harm employee morale and negatively impact employee recruiting and retention. In addition, 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.

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

We have a complex business that is growing in size and complexity both in the United States and in international jurisdictions. To manage our growth and our increasingly complex business operations, especially as we move into new markets internationally or acquire new businesses, we will need to maintain and may need to upgrade our operational and financial systems and procedures, which requires management time and may result in significant additional expense. Our business arrangements with our content partners, advertisers, licensed Roku TV partners, and other 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 must maintain 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 financial reporting, billing, and payment services. 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, advertisers, advertisement agencies, licensed Roku TV partners, or other licensees; cause harm to our reputation and brand; and result in errors in our financial and other reporting.

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 have in the past and 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 any anticipated benefits from an acquisition may never materialize.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results, may cause unfavorable accounting treatment, may expose us to claims and disputes by third parties, including intellectual property claims, and may not generate sufficient financial returns to offset additional costs and expenses related to the acquisitions. In addition, the process of integrating acquired businesses, products, or technologies may create unforeseen operating difficulties and expenditures, in particular when the acquired businesses, products, or technologies involve areas of operation in which we have limited or no prior experience. Acquisitions of businesses, products, or technologies 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 outstanding debt, and our credit facility 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, dated February 19, 2019 (as amended on May 3, 2019, the “Credit Agreement”) among us, as borrower, certain of our subsidiaries from time to time party thereto, as guarantors, the lenders and issuing banks from time to time party thereto, and Morgan Stanley Senior Funding, Inc., as administrative agent and collateral agent (the “Agent”), providing for (i) a four-year revolving credit facility in the aggregate principal amount of up to \$100.0 million (the “Revolving Credit Facility”), (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$100.0 million (the “Term Loan A Facility”), and (iii) an uncommitted incremental facility subject to certain conditions. 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 at least 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 and our subsidiary guarantors’ assets.

In November 2019, we borrowed an aggregate principal amount of \$100.0 million from the Term Loan A Facility. We also had outstanding letters of credit as of December 31, 2022 totaling \$37.7 million against the Revolving Credit Facility. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Senior Secured Term Loan A and Revolving Credit Facilities” elsewhere in this Annual Report. Our Credit Agreement matures on February 19, 2023, and we expect to repay the \$80.0 million balance outstanding under the Term Loan A Facility. While we may enter into a new credit agreement in the future, we currently have no other committed sources of financing, and we may not be able to obtain additional financing on terms favorable to us, if at all. See the risk factor below titled “*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.*”

As of December 31, 2022, we were in compliance with all of the covenants of the Credit Agreement. However, 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 outstanding debt under the Credit Agreement is accelerated, we may not have sufficient cash or be able to sell sufficient assets to repay it, which would harm our business and financial condition.

When we borrowed pursuant to the Term Loan A Facility, we chose a variable interest rate based on the one-month U.S. dollar London Interbank Offered Rate (“LIBOR”) as the benchmark for establishing the applicable interest rate. If we borrow pursuant to the Revolving Credit Facility, we are permitted to choose LIBOR as the benchmark for establishing the applicable interest rate as well. LIBOR, which is calculated and published for various currencies and

periods by the ICE Benchmark Administration Limited (“IBA”), is in the process of being phased out. The IBA has ceased publication of the one-week and two-month U.S. dollar LIBOR settings, and intends to cease publication of all other U.S. dollar LIBOR settings (including the one-month setting) after June 30, 2023. Accordingly, in the near future LIBOR will cease being a widely used benchmark interest rate. The current and any future reforms and other pressures may cause LIBOR to be replaced with a new benchmark or to perform differently than in the past, including during the transition period. Although our Credit Agreement will mature in February 2023 (before the cessation of the publication of the one-month U.S. dollar LIBOR setting), the consequences of the LIBOR developments cannot be entirely predicted and could have an adverse impact on the value of our LIBOR-linked financial obligations, such as an increase in the cost of our Credit Agreement indebtedness.

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 products and enhance our streaming platform, continue to expand the content on our 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 products and streaming platform, along with the timing and effort related to the introduction of new platform features, products, the hiring of experienced personnel, the expansion of sales and marketing activities, as well as overall economic conditions.

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.

Our Credit Agreement matures on February 19, 2023. While we may enter into a new credit agreement in the future, we currently have no other committed sources of financing, and 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.

Risks Related to Cybersecurity, Reliability, and Data Privacy

Significant disruptions of our information technology systems or data security incidents could harm our reputation, cause us to modify our business practices, and otherwise adversely affect our business and subject us to liability.

We are 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, personal, and other information, including intellectual property, proprietary business information, user payment card information, user video and audio recordings, other user information, employee 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 obligations under applicable laws, regulations, contracts, industry standards, self-certifications, and other documentation may include maintaining the confidentiality, integrity, and availability of personal information in our possession or control, maintaining reasonable and appropriate security safeguards as part of an information security program, and limits on the use or cross-border transfer of such personal information. These obligations create potential legal liability to regulators, our business partners, our users, and other relevant stakeholders and impact the attractiveness of our services to existing and potential users.

We have outsourced certain 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’ or others’ personal information (such as payment card information and user video and audio recordings), and as a result, we manage a number of third-party vendors and other partners who may or could have access to our information technology systems (including our computer networks) or to our confidential information. 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 in or have access to those systems, are 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 vulnerable to unintentional or malicious, internal, and external threats 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.

For example, despite our efforts to secure our information technology systems and the data contained in those systems, including our efforts to educate or train our employees, we and our third-party vendors have experienced, and remain vulnerable to, data security incidents, including data breaches, phishing attacks, and improper employee access of confidential data. Malicious attacks 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. The Russian invasion of Ukraine and resulting geopolitical conflict also have increased the risk of malicious attacks on information technology operations globally, including for companies headquartered in the United States.

Most of our employees now have a hybrid work schedule (consisting of both in-person work and working from home). Although we have implemented work from home protocols and offer work-issued devices to employees, the actions of our employees while working from home may have a greater effect on the security of our systems and the data we process, including by increasing the risk of compromise to our systems, intellectual property, or data arising from employees’ combined use of personal and private devices, accessing our systems or data using wireless networks that we do not control, or the ability to transmit or store company-controlled data outside of our secured network.

In addition to the threat of unauthorized access or acquisition of sensitive or personal information or intellectual property, other threats include the deployment of harmful malware, ransomware attacks, 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 regularly experience directed attacks that are intended to interrupt our operations; interrupt our users’, content publishers’, and advertisers’ ability to access our platform; extract money from us; or view or obtain our data (including without limitation user or employee personal information or proprietary information) or intellectual property. We cannot be certain that threat actors will not have a material impact on our systems or services in the future. Our safeguards intended to prevent or mitigate certain threats may not be sufficient to protect our information technology systems and data due to the developing sophistication and means of attack in the threat landscape as well as the impact that third-party vendors and third-party products may have on our cybersecurity.

Recent developments in the threat landscape include an increased number of cyber extortion and ransomware attacks, with increases in the amount of ransom demands and the sophistication and variety of ransomware techniques and methodology. Ransomware or other cybersecurity attacks affecting our third-party vendors also may impact our ability to operate our business, such as when our information technology or human resources vendors experience an outage of their systems, which renders services to downstream customers unavailable. Additionally, our third-party vendors or business partners’ information technology systems, or hardware/software provided by such third parties for use in our information technology systems, may be vulnerable to similar threats and our business could be affected by those or similar third-party relationships. Open source software, which may be incorporated into our systems or products, inherently presents a large attack surface and may contain vulnerabilities of which we are not aware and which we cannot control or fully mitigate. For example, the Apache Log4j vulnerability discovered in December 2021 can be exploited by remote code execution, which can allow a bad actor to steal data or take over our systems. We have taken steps to patch this vulnerability by updating our relevant Apache software, but we, and the many other affected organizations, remain vulnerable in light of the widespread use of the Apache Log4j library and difficulty in identifying all instances of this library across an entire enterprise. We cannot assure you that we will not be impacted by this or other similar vulnerabilities in the future.

We maintain insurance policies to cover certain losses relating to our information technology systems. However, there may be exceptions to our insurance coverage such that security incidents may not be covered by our insurance policies, and not all aspects of a security incident may be covered even where coverage exists. Insurance policies will also not protect against the reputational harms caused by a major 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.

The successful assertion of one or more large claims against us that exceeds our available insurance coverage, or results in changes to our insurance policies (including premium increases or the imposition of large deductible or co-insurance requirements), could have an adverse effect on our business. In addition, we cannot be sure that our existing insurance coverage and coverage for errors and omissions will continue to be available on acceptable terms or that our insurers will not deny coverage as to any future claim. 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, business partners, regulators, or other relevant stakeholders 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 threat actors. Any attempts by threat actors to disrupt our platform, streaming devices, smart home products, website, computer systems, or 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 threat actors from entering our computer systems or exploiting vulnerabilities in our products are expensive to implement and may not be effective in detecting or preventing intrusion or vulnerabilities.

Such unauthorized access to our data could damage our reputation and our business and could expose us to the risk of 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' or commercial partners' information technology systems or other similar data security incidents could adversely affect our business operations or result in the loss, misappropriation, or unauthorized access, use or disclosure of, or the prevention of access to, sensitive or personal 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, foreign invasions, and telecommunications 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 that we have experienced a data security incident that we have not discovered, attackers have become very sophisticated in the way they conceal their unauthorized 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 users, could disrupt our business, harm our reputation, compel us to comply with applicable federal 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 or reputational harm.

For example, in the wake of a data breach involving payment card data, we may be subject to substantial penalties and related enforcement for failure to adhere to the technical or operational security requirements of the Payment Card Industry ("PCI") Data Security Standards ("DSS") imposed by the PCI Council to protect cardholder data. Penalties arising from PCI DSS enforcement are inherently uncertain as penalties may be imposed by various entities within the payment card processing chain without regard to any statutory or universally mandated framework. Such enforcement could threaten our relationship with our banks, card brands we do business with, and our third-party payment processors.

In addition, any actual or perceived failure by us, our vendors, or our 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 personal 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 (including existing or potential users' perceiving our platform, system, or networks as less desirable) 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. There can be no assurance that the limitations of liability in our contracts would be enforceable or adequate or would otherwise protect us from liabilities or damages. 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 require “reasonable,” “appropriate,” or “adequate” technical and organizational security measures, and 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, appropriate, or reasonable by a regulator or court. Moreover, even security measures that are deemed appropriate, reasonable, or in accordance with applicable legal requirements may not be able to protect the information we maintain. 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 and reputational harm.

We and our service providers and partners collect, process, transmit, and store personal and confidential information, which creates legal obligations and exposes us to potential liability.

We collect, process, transmit, and store personal or confidential information about our users (and their devices), other consumers, employees, job applicants and partners, and we rely on third-party service providers to collect, process, transmit, and store personal or confidential information (including our users’ payment card data and video and audio recordings). We collect such information from individuals located both in the United States and abroad and may store or process such information outside the country in which it was collected. Further, we, our service providers and our business partners 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 to deliver relevant advertising and personalized content for ourselves and on behalf of our partners on our products.

We collect information about the interaction of users with our platform, devices, website, advertisements, and content publishers’ 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 users having the ability to refuse consent to or opt out from our, our service providers’, or our advertising partners’ collection and use of this data, restrictions imposed by advertisers, content publishers, licensors, and service providers, changes in technology, and developments in laws, regulations, and industry standards. For example, certain European Union (“EU”) laws and regulations prohibit access to or storage of information on a user’s device (such as cookies and similar technologies that we use for advertising) that is not “strictly necessary” to provide a user-requested service or used for the “sole purpose” of a transmission unless the user has provided consent, and users may choose not to provide this consent to collection of information which is used for advertising purposes.

Additionally, certain device manufacturers or operating system providers may restrict the deployment of cookies and similar technologies, or otherwise restrict the collection of personal information through these or other tools, via our applications. Any restrictions on our ability to collect or use data could harm our ability to grow our revenue, particularly our platform revenue which depends on engaging the relevant recipients of advertising campaigns.

Various federal, state, and foreign laws and regulations as well as industry standards and contractual obligations govern the collection, use, retention, protection, disclosure, cross-border transfer, localization, sharing, and security of the data we receive from and about our users, employees, and other individuals. The regulatory environment for the collection and use of personal information by device manufacturers, online service providers, content distributors, advertisers, and publishers is evolving in the United States and internationally.

Privacy and consumer rights groups and government bodies (including the U.S. Federal Trade Commission (“FTC”), state attorneys general, the European Commission, European and UK data protection authorities, and the Brazilian national data protection authority), have increasingly scrutinized privacy issues with respect to devices that identify or are identifiable to a person (or household or device) and personal information collected through the internet, and we expect such scrutiny to continue to increase. The U.S. federal government, U.S. states, and foreign governments have enacted (or are considering) laws and regulations that could significantly restrict industry participants’ ability to collect, use, and share personal information, such as by regulating the level of consumer notice and consent required before a company can place cookies or other tracking technologies. For example, the EU General Data Protection Regulation (“GDPR”) imposes detailed requirements related to the collection, storage, and use of personal information related to people located in the EU (or which is processed in the context of EU operations) and places new data protection obligations and restrictions on organizations, and may require us to make further changes to our policies and procedures in the future beyond what we have already done. In addition, in the wake of the United Kingdom’s withdrawal from the EU (“Brexit”), the United Kingdom has adopted a framework similar to the GDPR. The EU has recently confirmed that the UK data protection framework as being “adequate” to receive EU personal data. We are monitoring recent developments regarding amendments to the UK data protection framework and the impact this may have on our business.

We will continue to monitor the implementation and evolution of data protection regulations, but if we are not compliant with data protection laws or regulations if and when implemented, we may be subject to significant fines and penalties (such as restrictions on personal information processing) and our business may be harmed. For example, under the GDPR, fines of up to 4% of the annual global revenue of a noncompliant company, as well as data processing restrictions, could be imposed for violation of certain of the GDPR's requirements. Data protection laws continue to proliferate throughout the world and such laws likely apply to our business. For example, Brazil's General Data Protection Law ("LGPD") came into effect in August 2020. The LGPD bears many substantive similarities to the GDPR such as extra-territorial reach, enhanced privacy rights for individuals, data transfer restrictions, and mandatory breach notification obligations. It carries penalties of up to 2% of a company's annual revenue in Brazil.

The U.S. data protection legal landscape also continues to evolve, with various states having enacted broad-based data privacy and protection legislation and with states and the federal government continuing to consider additional data privacy and protection legislation. The potential effects of this legislation are far-reaching and may require us to modify our data processing practices and policies and incur substantial costs and expenses in an effort to comply.

For example, effective October 2019, Nevada amended its existing Security of Personal Information Law ("SPI Law") to require, among other things, that certain businesses provide a designated request address to intake requests from consumers to opt out of the sale of their personal data. Effective January 2020, the California Consumer Privacy Act ("CCPA") gives California residents certain rights with respect to their personal information, such as rights to access, and require deletion of, their personal information, opt out of the sale of their personal information, 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. The California Privacy Rights Act ("CPRA"), which becomes effective on January 1, 2023 (with a "look-back" to January 1, 2022), builds on the CCPA and among other things, requires the establishment of a dedicated agency to regulate consumer privacy issues. In recent years, Colorado, Connecticut, Virginia, and Utah have adopted laws introducing new privacy obligations for which we may need to take additional steps to comply.

We are continuing to assess the impact of new and proposed data privacy and protection laws and proposed amendments to existing laws on our business. Among other things, such restrictions are likely to increase the number of users to whom we cannot serve targeted advertising, and are likely to restrict our ability to collect and process certain types of information deemed sensitive under these new laws. The Canadian province of Quebec has also recently enacted a data protection law, known as Bill 64, that may similarly restrict our data processing activities.

In addition, each U.S. state and most U.S. territories, each EU member state, and the United Kingdom, as well as many other foreign nations, have passed laws requiring notification to regulatory authorities, affected users, or others within a specific timeframe when there has been a security breach involving, or other unauthorized access to or acquisition or disclosure of, certain personal information and impose additional obligations on companies. Additionally, our agreements with certain users or partners may require us to notify them in the event of a security breach. Such statutory and contractual disclosures are costly, could lead to negative publicity, may cause our users to lose confidence in the effectiveness of our security measures, and may require us to expend significant capital and other resources to respond to or alleviate problems caused by the actual or perceived security breach. Compliance with these obligations could delay or impede the development of new products and may cause reputational harm.

As part of our data protection compliance program, we have implemented data transfer mechanisms to provide for the transfer of personal information from the European Economic Area (the "EEA") or the United Kingdom to the United States. However, there are certain unsettled legal issues regarding the adequacy of data transfers to the United States, the resolution of which may adversely affect our ability to transfer personal information from the EEA to the United States. On July 16, 2020, the European Court of Justice ruled the EU-U.S. Privacy Shield to be an invalid data transfer mechanism, confirmed that the Model Clauses remain valid, and left unaddressed some issues regarding supplementary measures that may need to be taken to support transfers. On March 25, 2022, the European Commission and U.S. government announced that an agreement in principle on a new framework for data transfers from the EEA to the United States had been reached, known as the EU-U.S. Data Privacy Framework ("EU-U.S. DPF"), and that this new framework should address the concerns raised in the 2020 European Court of Justice decision. On December 13, 2022, the European Commission released its draft adequacy decision on the EU-U.S. DPF, which, once formally adopted, would recognize that the United States ensures an adequate level of protection for personal data transferred from the EU to organizations certified under the EU-U.S. DPF. Additional steps will need to be taken to formally adopt and implement this framework, however, and we are not yet able to predict precisely when or the degree to which it will provide a consistent mechanism for our data transfers between the two jurisdictions. In addition, in 2021, the European Commission published updated versions of the Model Clauses, which must be incorporated into new and existing agreements by no later than December 27, 2022 in order to continue to lawfully transfer personal information

outside of the EEA. The United Kingdom published final versions of its own Model Clauses in February 2022. Updating agreements to incorporate these new Model Clauses for the EEA and United Kingdom has required, may in the future require, significant time and resources to implement, including through adjusting our operations, conducting requisite data transfer assessments, and revising our contracts. In addition, cloud service providers upon which our services depend are experiencing heightened scrutiny from EU regulators, which may lead to significant shifts or unavailability of cloud services to transfer personal information outside the EU, which may significantly impact our costs or ability to operate. We continue to assess the available regulatory guidance, determinations, and enforcement actions from EU Data Protection Authorities and the U.S. Department of Commerce on international data transfer compliance for companies, including guidance on specific supplementary measures in addition to the Model Clauses as well as specific data sharing that may be deemed a cross-border transfer for which appropriate safeguards must be implemented. Our ability to continue to transfer personal information outside of the EU may become significantly more costly and may subject us to increased scrutiny and liability under the GDPR or other legal frameworks, and we may experience operating disruptions if we are unable to conduct these transfers in the future.

We will continue to review our business practices and may find it necessary or desirable to make changes to our personal information processing to cause our transfer and receipt of EEA residents' personal information to conform to 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.

In addition, some countries are considering or have enacted "data localization" laws requiring that user data regarding users in their respective countries be maintained, stored, or processed in their respective countries. Maintaining local data centers in individual countries could increase our operating costs significantly. We expect that, in addition to the "business as usual" costs of compliance, the evolving regulatory interpretation and enforcement of laws such as the GDPR and CPRA, as well as other domestic and foreign data protection laws, 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 indemnities, or public statements against us by consumer advocacy groups or others. In addition to potential liability, these events could harm our business.

We publish privacy policies, notices, and other documentation regarding our collection, processing, use, and disclosure of personal information, credit card information, and other confidential information. Although we endeavor to comply with our published policies, certifications, and documentation, we may at times fail to do so or may be perceived to have failed to do so.

Moreover, despite our efforts, we may not be successful in achieving compliance if our employees, representatives, agents, vendors, or other third parties fail to comply with our published policies, certifications, and documentation. Such failures can subject us to potential international, local, state, and federal action if they are found to be deceptive, unfair, or misrepresentative of our actual practices.

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.

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 as well as the teams of our service providers and partners for the performance and operation of the Roku OS, streaming platform, smart home products, and computer systems. For example, our smart home product line is reliant on (among other things) the engineering and software development teams and information technology systems of the service providers we use to assist in the design, manufacture, and maintenance of those products. Service interruptions, errors in our software, or the unavailability of computer systems used in our operations could diminish the overall attractiveness of our products and streaming platform to existing and potential users or otherwise disrupt our business. 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 such a transition effectively, we may experience a loss or degradation in services, operational delays, or 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, wars, foreign invasions, terrorist activity, 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, products, or services, could result in liabilities to our customers or third parties, and could adversely affect our business. Our property insurance and cyber liability insurance may not be sufficient to fully cover our losses or may not cover a particular event at all. 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 our 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 invest in our technology infrastructure to maintain and improve the user experience and platform performance. To the extent that we or our third-party service hosting providers do not effectively address capacity constraints, upgrade or patch systems as needed, and continually develop 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.

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

Our business relies upon the ability of our users to access high-quality streaming content through the internet. As a result, the growth of our business depends on our users' ability to obtain and maintain high-speed access to the internet at reasonable cost, which relies in part on internet service 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, disruptions, or delays in their operations, as well as any decision they may make to prioritize the delivery of certain network traffic at the expense of other traffic. Any material disruption or degradation 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 streaming platform. We may also face increased costs of doing business, or decreased demand for our services, if network operators engage in discriminatory practices with respect to streamed video content in an effort to monetize access to their networks or customers by data providers.

Certain laws intended to prevent network operators from engaging in discriminatory practices with respect to streaming video content have been implemented in many countries, including in the EU. In other countries, laws in this area may be nascent or non-existent. Furthermore, favorable laws may change. Given the uncertainty around these laws and the rules that implement them, including changing interpretations, amendments, or repeal, coupled with potentially significant political and economic power of network operators, we could experience discriminatory or anti-competitive practices, such as usage-based pricing, bandwidth caps, zero rating of competing services by ISPs, and traffic "shaping" or throttling, that could impede our growth, result in a decline in our quality of service, cause us to incur additional expense, or otherwise impair our ability to attract and retain users, all of which could harm our business.

In addition, most network operators that provide consumers with access to the internet also offer consumers multichannel video programming, and some network operators also own streaming services. 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.

Risks Related to Intellectual Property

Litigation and claims regarding intellectual property rights could result in the loss of rights important to our products and streaming platform, cause us to incur significant legal costs, 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 grow and 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, has been and is expected to 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's attention from our other business concerns. 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 products; enter into potentially unfavorable royalty or license agreements in order to obtain the right to use necessary technologies, content, or materials; and indemnify our partners and other third parties.

For example, we have in the past elected to develop and implement specific design changes to address potential risks that certain products could otherwise become subject to exclusion or cease and desist orders arising from patent infringement and other intellectual property claims brought in the U.S. International Trade Commission. 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.

If we fail to, or are unable 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 of 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 provide the same level of protection of corporate proprietary information and assets such as intellectual property, trademarks, trade secrets, know-how, and records as the laws of the United States. For instance, the legal systems of certain countries, particularly certain developing countries, do not

favor the enforcement of patents and other intellectual property protection. As a result, we may encounter significant problems in protecting and defending our intellectual property or proprietary rights abroad. Additionally, we may also be exposed to material risks of theft or unauthorized reverse engineering of our proprietary information and other intellectual property, including technical data, manufacturing processes, data sets, or other sensitive information. Our efforts to enforce our intellectual property rights in such foreign countries may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop, which could have a material adverse effect on our business, financial condition, and results of operations. Moreover, 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. U.S. patent laws, and the 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 (“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 products 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 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 jurisdiction in which we conduct business. In particular, our actions to monitor and enforce our trademarks against third parties may not prevent counterfeit versions of our products or products bearing confusingly similar trademarks to ours from entering the marketplace, which could divert sales from us, tarnish our reputation, or reduce the demand for our products.

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.

Our use of open source software could impose limitations on our ability to commercialize our products and our streaming platform or could result in public disclosure of competitively sensitive trade secrets.

We incorporate open source software in our proprietary software. From time to time, companies that have incorporated open source software into their products and services have faced claims challenging the ownership of certain open source software or compliance with open source software license terms. Therefore, we could be subject to similar suits by parties claiming ownership of what we believe to be open source software or our noncompliance with the open source software license terms.

Although we have processes and procedures designed to help monitor our use of open source software, these processes and procedures may not be followed appropriately or may fail to identify risks. Additionally, 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 our products or technology or impose unanticipated obligations that could require the disclosure of trade secrets. In such event, we could be required to make portions of our proprietary software generally available under similar open source software license terms to third parties, including competitors, at no cost, to seek licenses from third parties in order to continue offering our products, to re-engineer our products, or to discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis or at all, any of which could harm our business.

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 have in the past, and may in the future, 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 licensed Roku TV partners 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 streaming device in question, even if the claim does not pertain to our technology. Liability under our indemnification commitments may not be contractually limited.

Risks Related to Macroeconomic Conditions

Macroeconomic uncertainties have in the past and may continue to adversely impact our business, results of operations, and financial condition.

Global economic and business activities continue to face widespread macroeconomic uncertainties, including increased inflation and interest rates, recessionary fears, financial and credit market fluctuations, changes in economic policy, the prolonged COVID-19 pandemic, and global supply chain constraints. Such macroeconomic uncertainties may continue for an extended period and have adversely impacted, and may continue to adversely impact, many aspects of our business.

Our business has been, and may continue to be, impacted by the COVID-19 pandemic and resulting economic consequences. While we saw an acceleration in both streaming hours and account activations at the beginning of the COVID-19 pandemic, more recently, we believe this growth has declined. In 2022, global supply chain disruptions resulted in shipping delays, increased shipping costs, component shortages, and increases in component prices, and some of our licensed Roku TV partners faced inventory challenges that negatively impacted their unit sales.

Our business is dependent on consumer discretionary spending and advertising spending, both of which are susceptible to changes in macroeconomic conditions, such as growing inflation, rising interest rates, recessionary fears, and economic uncertainty. Sustained or worsening inflation or an economic downturn may result in fewer consumer purchases of our products or the products of our licensed Roku TV partners (which could impact our active account growth) and reduced advertising spending (which could impact our monetization efforts). Some of our advertising verticals have experienced supply chain disruptions that negatively impacted their product availability, which, together with inflation and other macroeconomic factors, have resulted in advertisers reducing their overall advertising spend. If this pullback in consumer discretionary spending and advertising spending continues, our future operating results will be adversely affected.

The extent to which macroeconomic uncertainties may continue to impact our operational and financial performance remains uncertain and will depend on many factors outside our control. These direct and indirect impacts may negatively affect our business and operating results.

Natural disasters, geopolitical conflicts, or other natural or man-made catastrophic events could disrupt and impact our business.

Occurrence of any catastrophic event, including an earthquake, flood, tsunami, or other weather event, power loss, internet failure, software or hardware malfunctions, cyber attack, war or foreign invasion (such as the Russian invasion of Ukraine), terrorist attack, medical epidemic or pandemic (such as the COVID-19 pandemic), other man-made disasters, or other catastrophic events could disrupt our business operations. Any of these business disruptions could require substantial expenditures and recovery time in order to fully resume operations.

In particular, our principal offices are located in California, and our contract manufacturers and some of our suppliers are located in Asia, both of which are regions known for seismic activity, making our operations in these areas vulnerable to natural disasters or other business disruptions in these areas. Our insurance coverage may not compensate us for losses that may occur in the event of an earthquake or other significant natural disaster.

In addition, our offices and facilities, and those of our contract manufacturers, suppliers, and licensed Roku TV partners, could be vulnerable to the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity) that could disrupt our business operations. For example, in California, increasing intensity of drought and annual periods of wildfire danger increase the probability of planned power outages. Further, acts of terrorism could cause disruptions to the internet or the economy as a whole.

If our streaming platform was to fail or be negatively impacted as a result of a natural disaster or other event, our ability to deliver streaming content, including advertising, to our users would be impaired. Disruptions in the operations of our contract manufacturers, suppliers, or licensed Roku TV partners as a result of a disaster or other catastrophic event could delay the manufacture and shipment of our products or the products of our licensed Roku TV partners, which could impact our business. If we are unable to develop adequate plans to ensure that our business functions continue to operate during and after a disaster or other catastrophic event and to execute successfully on those plans in the event of a disaster or catastrophic event, our business would be harmed.

Legal and Regulatory Risks

If government regulations or laws relating to the internet, video, advertising, 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 or affected by general business regulations and laws, as well as regulations and laws specific to the internet and online services, including 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, trade, intellectual property, competition, electronic contracts, internet access, net neutrality, advertising, calling and texting, content restrictions, protection of children, 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 federal, state, and foreign laws and regulations governing issues such as data privacy and security, payment processing, taxation, net neutrality, liability of providers of online services, video, telecommunications, e-commerce tariffs, and consumer protection related to the internet continue to develop. Moreover, as internet commerce and advertising continue to evolve, increasing regulation by federal, state, and foreign regulatory authorities becomes more likely.

As we develop new services and devices and improve our streaming platform, we may also be subject to new laws and regulations specific to such technologies. For example, in developing the reference design of TVs powered by Roku OS, 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 we or our licensed Roku TV partners may be unable to sell TVs powered by Roku OS at all, which could 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, consumer protection, children's online protection, and similar activities continue to proliferate, often with little harmonization between jurisdictions and limited guidance. A number of 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. Certain state laws, such as the CCPA, the CPRA, and the Virginia Consumer Data Protection Act, also impose requirements on certain tracking activity. The EU has laws requiring advertisers or companies like ours to, for example, obtain unambiguous, affirmative consent from users for the placement of cookies or other tracking technologies and the delivery of relevant advertisements. In addition, the EU has adopted the Digital Services Act, which is legislation that updates the liability and safety rules for digital platforms, products, and services. 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 ("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.

In addition, the FTC has initiated a review of its rules implementing the Children's Online Privacy Protection Act ("COPPA"), which limits the collection by operators of online services of personal information from children under the age of 13. The review could result in broadening the applicability of COPPA, including the types of information that are subject to these regulations. There have also been proposals in the U.S. Congress to amend and expand COPPA. Changes to the COPPA legislation or rules could limit the information that we or our content publishers and advertisers may collect and use and the content of advertisements in relation to certain channel partner

content. The CPRA and certain other state privacy laws also impose certain opt in and opt out requirements before certain information about minors can be collected.

The EU and many of its member states, among other jurisdictions, also have rules that limit processing of personal data, including children's data, and that impose specific requirements intended to protect children online. We and our content publishers and advertisers could be at risk for violation or alleged violation of these and other privacy, advertising, children's online protection, or similar laws.

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

Our business is subject to risks generally associated with doing business abroad, such as U.S. and foreign governmental regulation in the countries in which we operate and the countries in which our contract manufacturers, component suppliers, and other business partners are located. Our operations and performance depend significantly on global, regional, and U.S. economic and geopolitical conditions.

For example, tensions between the United States and China have led to the United States' imposition of a series of tariffs, sanctions, and other restrictions on imports from China and sourcing from certain Chinese persons or entities, as well as other business restrictions. Additionally, following Russia's invasion of Ukraine, the United States and other countries imposed economic sanctions and severe export control restrictions against Russia and Belarus, and the United States and other countries could impose wider sanctions and export restrictions and take other actions should the conflict further escalate. These and other geopolitical tensions and trade disputes can disrupt supply chains and increase the cost of our products and the components required to manufacture our products, as well as costs for our licensed Roku TV partners. This could cause our products and those of our licensed Roku TV partners to be more expensive for consumers, which could reduce the demand for or attractiveness of such products. In addition, a geopolitical conflict in a region where we operate could disrupt our ability to conduct business operations in that region. Beyond tariffs and sanctions, countries also could adopt other measures, such as controls on imports or exports of goods, technology, or data, which could adversely affect our operations and supply chain and limit our ability to offer our products and services as intended. These kinds of restrictions could be adopted with little to no advanced notice, and we may not be able to effectively mitigate the adverse impacts from such measures. Political uncertainty surrounding trade or other international disputes also could have a negative impact on consumer confidence and willingness to spend money, which could impair our future growth. In particular, given the general deterioration in U.S.-China relations and ongoing tensions on trade, security, and human rights, additional U.S. sanctions, tariffs, and export or import restrictions, as well as Chinese sanctions or retaliatory measures, remain a serious risk.

We cannot predict whether new international trade agreements will be negotiated or existing trade agreements renegotiated; whether new trade or tariff actions will be announced by the Biden Administration with other U.S. trading partners; 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 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, and higher prices could depress consumer demand. 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 products, commodities, software, and technology, including through import and export licensing requirements, and have enacted laws that could limit our ability to distribute our products or collaborate on technology with our commercial or strategic partners, or could limit the ability of our commercial or strategic partners 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, disrupt supply chains, prevent our commercial 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 changes in U.S. or foreign export or import regulations, customs duties, or other restrictions on intangible goods (such as cross-border data flows) could result in decreased use of our products by, or in our decreased ability to export or sell our products and services to, existing or new customers in U.S. or international markets or hamper our ability to source products, components, and parts from certain suppliers or lead to potential supply chain disruptions and business or reputational harms. Any decreased use of our products or limitation on our ability to export, import, or sell our products or services, or source parts or components, could harm our business.

Although we attempt to ensure that we, our retailers, and partners comply with the applicable import, export, and sanctions laws, we cannot guarantee full compliance by all. Actions of our retailers and partners are not within our

complete control, and our products could be re-exported to sanctioned persons or countries, or provided by our retailers to third persons in contravention of our requirements or instructions or the laws. In addition, there are inherent limitations to the effectiveness of any policies, procedures and internal controls relating to such compliance, and there can be no assurance that such procedures or internal controls will work effectively at all times or protect us against liability under anti-corruption, sanctions or other laws for actions taken by us, our retailers or partners. Any such potential violation could have negative consequences, including government investigations or penalties, and our reputation, brand, and revenue may be harmed.

In addition, the effects of the United Kingdom's departure from the EU have been and are expected to continue to be far-reaching. Brexit and the perceptions as to its impact may adversely affect business activity and economic conditions. Brexit could also have the effect of disrupting the free movement of goods, services, and people between the United Kingdom and the EU, and some disruptions have already occurred. Brexit could also lead to legal uncertainty and potentially divergent national laws and regulations as the United Kingdom determines which EU laws to replace or replicate.

Although the *EU-UK Trade and Cooperation Agreement* on the EU-UK post-Brexit economic relationship took effect on January 1, 2021, it is incomplete, and the full effects of Brexit are uncertain. Given these possibilities and others we may not anticipate, as well as the lack of comparable precedent, the full extent to which our business, results of operations, and financial condition could be adversely affected by Brexit is uncertain.

U.S. or international rules (or the absence of rules) that permit internet access network operators to degrade users' internet speeds or limit internet data consumption by users, including unreasonable discrimination in the provision of broadband internet access services, could harm our business.

Our products and services depend on the ability of our users to access the internet. 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, or that disincentivize internet access network operators' willingness to invest in upgrades and maintenance of their equipment, 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. Some jurisdictions have adopted regulations governing the provision of internet access service. Substantial uncertainty exists in the United States and elsewhere regarding such provisions. For example, in 2015, the FCC adopted open internet rules to prevent internet access network operators from unreasonably restricting, blocking, degrading, or charging for access to certain products and services offered by us and our content partners. In 2018, the FCC repealed most of those rules. More recently, the Biden Administration signed an executive order encouraging the FCC to readopt comprehensive open internet rules. The FCC therefore could consider adopting additional or modified rules to prevent internet access network operators from unreasonably restricting, blocking, degrading, or charging for data and services. If network operators were to engage in restricting, blocking, degrading, or charging for access, it could impede our growth, result in a decline in our quality of service, cause us to incur additional expense, or otherwise impair our ability to attract and retain users, any of which could harm our business. Several states and foreign countries in which we operate also have adopted or are considering rules governing the provision of internet access.

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.

If we are found liable for content that is distributed through or advertising that is served 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. We rely on the statutory safe harbors, as set forth in the Digital Millennium Copyright Act (the "DMCA"), Section 230 of the Communications Decency Act ("Section 230") in the United States, and the E-Commerce Directive in Europe, for protection against liability for various caching, hosting, and linking activities. The DMCA, Section 230, and similar statutes and doctrines on which we rely or may rely in the future are subject to uncertain judicial interpretation and regulatory and legislative amendments. Any legislation or court rulings that limit the applicability of these safe harbors could require us to take a different approach toward content moderation on our platform, which

could diminish the depth, breadth, and variety of content that we offer, inhibit our ability to generate advertising, or otherwise adversely affect our business.

Moreover, 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 liabilities 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 or the advertisements that are served through 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, regardless of any legal protections that may limit our liability for the actions of third parties, 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. If content owners or distributors are deterred from working with us as a consequence, it could impair our ability to maintain or expand our business, including through international expansion plans.

If we fail to maintain effective internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and our stock price 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 (“Section 404”) requires that we furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment must include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. Our independent registered public accounting firm also attests to the effectiveness of our internal control over financial reporting. If we have a material weakness in our internal control over financial reporting in the future, we may not detect errors on a timely basis, and our financial statements may be materially misstated. If we identify material weaknesses in our internal control over financial reporting, are unable to continue 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 SEC, The Nasdaq Global Select Market, or other regulatory authorities, which could require additional financial and management resources.

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

U.S. GAAP are subject to interpretation by the Financial Accounting Standards Board, the SEC, and other 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. 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 we fail to comply with the laws and regulations relating to the payment of income taxes and the collection of indirect taxes, we could be exposed to unexpected costs, expenses, penalties, and fees as a result of our noncompliance, which could harm our business.

We are subject to requirements to deduct or withhold income taxes on revenue sourced in various jurisdictions, pay income taxes on profits earned by any permanent establishment (or similar enterprise) of ours that carries on business in various jurisdictions, and collect indirect taxes from our sales in various jurisdictions. The laws and regulations governing the withholding and payment of income taxes and the collection of indirect taxes are numerous, complex, and vary by jurisdiction. A successful assertion by one or more jurisdictions that we were required to withhold or pay income taxes or collect indirect 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.

We earn a portion of our income in foreign countries and, as such, we are subject to tax laws in the United States and numerous foreign jurisdictions. Current economic and political conditions make tax laws and regulations, or their interpretation and application, in any jurisdiction subject to significant change.

Proposals to reform U.S. and foreign tax laws could significantly impact how U.S. multinational corporations are taxed on foreign earnings and could increase the U.S. corporate tax rate. Although we cannot predict whether or in what form these proposals will pass, several of the proposals under consideration, if enacted into law, could have an adverse impact on our effective tax rate, income tax expense, and cash flows.

In addition, both tax policy and tax administration are becoming multilateral. This multilateralism and collaboration among taxing authorities (including the U.S. and many foreign jurisdictions in which we operate) has resulted in proposed new tax measures specifically targeting online commerce, digital services, streaming services, and the remote sale of goods and services. Some of these measures (such as a global corporate minimum tax) require adoption of local legislation consistent with the agreed to multilateral framework. Other measures (such as digital services taxes) have already been implemented but may terminate upon the adoption of multilateral tax rules.

The rapid growth of multilateralism in tax administration means greater sharing of tax information among taxing authorities as well as the likelihood of joint and simultaneous tax audits of companies such as ours who have cross-border business activities in which the tax administrations may have a common or complementary interest. The results of any such audits or related disputes could have an adverse effect on our financial results for the period or periods for which the applicable final determinations are made. For example, we and our subsidiaries are engaged in intercompany transactions across multiple tax jurisdictions. Although we believe we have clearly reflected the economics of these transactions and that the proper local transfer pricing is in place, tax authorities may propose and sustain adjustments that could result in changes that may impact our mix of earnings in countries with differing statutory tax rates.

We have been, are currently, and may in the future be subject to regulatory inquiries, investigations, and proceedings, which could cause us to incur substantial costs or require us to change our business practices in a way that could seriously harm our business.

We have been, are currently, and may in the future be subject to investigations and inquiries from government entities. These investigations and inquiries, and our compliance with any associated regulatory orders or consent decrees, may require us to change our policies or practices, subject us to substantial monetary fines or other penalties or sanctions, result in increased operating costs, divert management's attention, harm our reputation, and require us to incur significant legal and other expenses, any of which could seriously harm our business.

Risks Related to Ownership of Our Class A Common Stock

The dual class structure of our common stock concentrates voting control with those stockholders who held our stock prior to our initial public offering, including our executive officers, employees, and directors and their affiliates, and limits the ability of holders of our Class A common stock 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 Mr. Wood 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 a majority of the outstanding shares of our common stock. This concentrated control will limit the ability of holders of our Class A common stock 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 has 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. As a result of such transfers, as of December 31, 2022, Mr. Wood controls a majority of the combined voting power of our Class A and Class B common stock even though he only owns 12.4% of the outstanding Class A and Class B common stock. As a member of our Board of Directors (our "Board"), 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. This concentrated control could delay, defer, or prevent a change of control, merger, consolidation, or sale of all or substantially all of our assets that our other stockholders support, or conversely this concentrated control could result in the consummation of such a transaction that our other stockholders do not support. This concentrated control could also discourage a potential investor from acquiring our Class A common stock, which has limited voting power relative to the Class B common stock, and might harm the market price of our Class A common stock.

We have not elected to take advantage of the “controlled company” exemption to the corporate governance rules for companies listed on The Nasdaq Global Select Market.

The market 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 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;
- our loss of key content publishers;
- changes in laws or regulations applicable to our products 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, or joint ventures;
- 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, including short selling of our Class A common stock;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- general economic and market conditions; and
- other events or factors, including those resulting from civil unrest, war, foreign invasions, terrorism, or public health crises, or responses to such events.

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 addition, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation or derivative litigation. For example, a stockholder previously filed a derivative lawsuit (which has been dismissed), purportedly on our behalf, against certain members of our Board and management in the Delaware Court of Chancery. Such litigation could result in substantial costs and divert our management’s attention from other business concerns.

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 or issue 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 market price of our Class A common stock could decline. All of our outstanding Class A shares are eligible for sale in the public market, other than shares and stock 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 directors, employees, and certain contingent workers 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 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 year, at the end of the trading day on the Wednesday before Thanksgiving. These directors, employees, and contingent workers may also sell shares during a closed window period 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 is dilutive to existing stockholders and the market 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 or if they downgrade our stock, 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.

If securities or industry analysts cover our company and one or more of these analysts downgrades our stock or issues other unfavorable commentary or research, the price of our Class A common stock could decline. 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 legal, accounting, and other expenses. In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure, including SEC and The Nasdaq Global Select Market regulations, 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 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, on committees of our Board, 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 Credit Agreement contains prohibitions on the payment of cash dividends on our capital stock. 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 of our charter documents and 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 our company, 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 so that not all directors are elected at one time;
- permitting our Board 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 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 Section 203 of the Delaware General Corporation Law, which prohibits 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 affect the price that some investors are willing to pay for our Class A common stock.

Our certificate of incorporation provides that the Delaware Court of Chancery and the U.S. federal district courts 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 certificate of incorporation provides that the Delaware Court of Chancery is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- 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 certificate of incorporation, or our bylaws; and
- any action asserting a claim against us that is governed by the internal affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims.

To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our certificate of incorporation provides that the U.S. federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive forum provisions 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 either exclusive forum provision in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving such action in other jurisdictions, all of which could harm our business.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are currently located in San Jose, California under a lease that expires in September 2030. We use this space for sales, research and development, and administrative purposes. In addition, we lease various office and shared work spaces throughout the United States and internationally. We believe that our facilities are suitable to meet our current needs.

Item 3. Legal Proceedings

Information with respect to this item may be found in Note 13 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference.

Item 4. Mine Safety Disclosures

None.

PART II

Item 5. Market for Registrant’s Common Equity, 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.

Holdings of Record

As of December 31, 2022, there were approximately 64 stockholders of record of our Class A common stock and 15 stockholders of record of our Class B common stock. The actual number of stockholders of our Class A common stock is greater than the number of record holders and includes stockholders who are beneficial owners but whose shares of common stock are held in street name by banks, brokers, and other nominees.

Dividend Policy

We have never declared or paid any dividends on our Class A or Class B common stock. We currently intend to retain all available funds and any future earnings for use in our business and therefore we do not anticipate declaring or paying any cash dividends in the foreseeable future. The terms of our Credit Agreement also restrict our ability to pay dividends, and we may also enter into credit agreements or other borrowing arrangements in the future that will restrict our ability to declare or pay cash dividends on our capital stock.

Sale of Unregistered Securities and Use of Proceeds

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

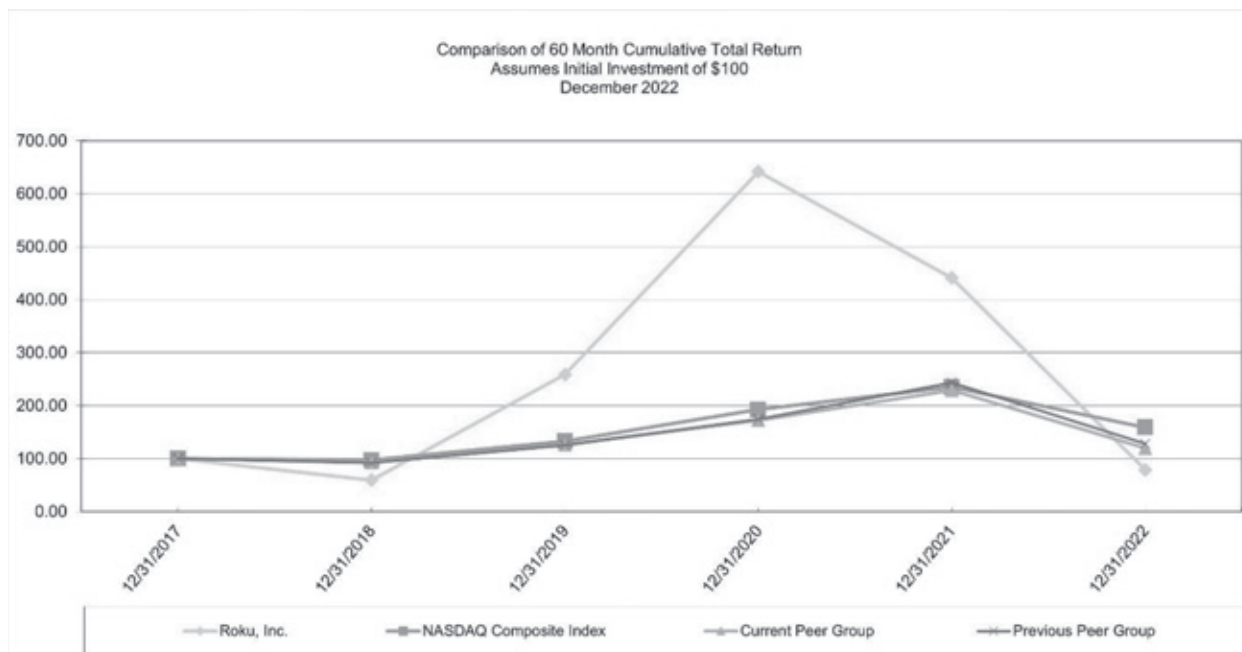
None.

Stock Performance Graphs and Cumulative Total Return

The following graph shows the cumulative total stockholder return of an investment of \$100 in cash from December 31, 2017 through December 31, 2022, for (i) our Class A common stock, (ii) the Nasdaq Composite Index, and (iii) the Current Peer Group of companies described below. Because no published index of comparable companies is currently available, we have used the Peer Group of companies for the purposes of this graph in accordance with the requirements of the SEC.

We adjusted our Peer Group for fiscal 2022 to align with the changes in our business and comparability of metrics. Our Previous Peer Group consisted of Alphabet, Inc., Logitech International S.A., Meta Platforms, Inc., Netflix, Inc., Snap, Inc., Twitter, Inc., Yelp, Inc., and Zillow Group, Inc. Our Current Peer Group consists of Alphabet, Inc., Fox Corp, fuboTV, Inc., Interpublic Group of Companies, Inc., LiveRamp Holdings, Inc., Magnite, Inc., Meta Platforms, Inc., Netflix, Inc., Paramount Global, Pinterst, Inc., Pubmatic, Inc., Snap, Inc., Tradedesk Financial Corp, Vizio Holding Corp, Walt Disney Co., and Warner Bros. Discovery, Inc. Both previous and current peer groups are reflected in this year of transition.

Pursuant to applicable SEC rules, all values assume reinvestment of the full amount of all dividends, however no dividends have been declared on our Class A common stock or Class B 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 / Index	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
Roku, Inc.	\$100	\$59	\$259	\$641	\$441	\$79
Nasdaq Composite	\$100	\$97	\$133	\$192	\$235	\$159
Current Peer Group	\$100	\$93	\$126	\$172	\$229	\$120
Previous Peer Group	\$100	\$92	\$125	\$174	\$243	\$128

Source: Prepared by Zacks Investment Research, Inc. Used with permission. All rights reserved. Copyright 1980-2022.
Index Data: Copyright NASDAQ OMX, Inc. Used with permission. All rights reserved.

The information under “Stock Performance Graphs and Cumulative Total Return” is not deemed to be “soliciting material” or “filed” with the SEC or subject to Regulation 14A or 14C, or to the liabilities of Section 18 of the Exchange Act and is not to be incorporated by reference in any filing of the Company under the Securities Act, or the Exchange Act, whether made before or after the date of this Annual Report and irrespective of any general incorporation language in those filings.

Item 6. Reserved

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 in Item 8 of this Annual Report. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, beliefs, and expectations, and involve risks and uncertainties. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report, particularly in the section titled Item 1A. Risk Factors and the Note Regarding Forward-Looking Statements.

This section of this Annual Report generally discusses fiscal years 2022 and 2021 and year-to-year comparisons between those years. Discussions of fiscal year 2020 and year-to-year comparisons between fiscal years 2021 and 2020 that are not included in this Annual Report can be found in Management’s Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7 of our Annual Report for the fiscal year ended December 31, 2021 filed with the SEC on February 18, 2022.

Overview

Effective as of the fourth quarter of fiscal 2022, we reorganized our reportable segments to better align with management’s reporting of information reviewed by the Chief Operating Decision Maker (“CODM”) for each segment. We renamed our “player” segment to “devices” which now includes our licensing arrangements with service operators and licensed Roku TV partners in addition to sales of our streaming players, audio products, smart home products and Roku-branded TVs that will be designed, made, and sold by us in 2023. Our historical segment information is recast to conform to our new presentation in our financial statements and accompanying notes included in Item 8 of this Annual Report.

Our two reportable segments are the platform segment and the devices segment. Platform revenue is generated from the sale of digital advertising and related services including the demand-side platform and content distribution services such as subscription and transaction revenue shares, media and entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls.

Devices revenue is generated from the sale of streaming players, audio products, smart home products, and, beginning in 2023, Roku-branded TVs, and related accessories as well as from licensing arrangements with service operators and licensed Roku TV partners. We expect to continue to manage the average selling prices (“ASP”) of Roku streaming devices to increase our active accounts. We expect that the trade off from devices gross profit or loss to grow active accounts will result in increased platform revenue and platform gross profit.

Business Conditions and Macroeconomic Factors

Macroeconomic factors, such as increased inflation and interest rates, recessionary fears, financial and credit market fluctuations, changes in economic policy, the prolonged COVID-19 pandemic, global supply chain constraints, and geopolitical developments (such as the war in Ukraine), have had, and we believe will continue to have, an impact on our business and results of operations. For example, in 2022, some of our licensed Roku TV partners faced inventory challenges that negatively impacted their unit sales. In addition, some of our advertising verticals experienced supply chain disruptions that negatively impacted their product availability, which, together with inflation and other macroeconomic factors, have resulted in advertisers in a variety of industries reducing their overall advertising spend, which has adversely affected our platform revenue. We believe rising inflation and recessionary fears also have led to a reduction in consumer discretionary spending, which has driven a decrease in our devices revenue. The COVID-19 pandemic continues to affect our business, although to a lesser extent than in the past. The ongoing effects of the pandemic and associated economic conditions remain difficult to predict due to numerous uncertainties. We believe that the direct and indirect impacts of these business conditions and macroeconomic factors are difficult to isolate or quantify. See Item 1A, Risk Factors, and the Note Regarding Forward Looking Statements elsewhere in this Annual Report for additional details.

Key Performance Metrics

The key performance metrics we use to evaluate our business, measure our performance, develop financial forecasts and make strategic decisions are gross profit, active accounts, streaming hours, and ARPU.

Gross Profit

We use gross profit as the primary metric to measure the performance of our business because we have two revenue segments that have different margin profiles, and we aim to maximize our higher margin platform revenue from our active accounts as they stream content on our platform. All of our gross profit is generated from our platform segment.

Our gross profit was \$1,441.1 million and \$1,408.6 million for the years ended December 31, 2022 and 2021, respectively, reflecting an increase of 2%.

Active Accounts

We believe that the number of active accounts is a relevant measure to gauge the size of our user base. 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 who streamed content from The Roku Channel only on non-Roku platforms are not included in this metric. Additionally, users who only register an account for use of one of our smart home products are not included in our reported number of active accounts. 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 be used on multiple streaming devices.

We had 70.0 million and 60.1 million active accounts as of December 31, 2022 and 2021, respectively reflecting an increase of 16%.

Streaming Hours

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. We define streaming hours as the aggregate amount of time streaming devices stream content on our platform in a given period. Hours streamed from The Roku Channel on non-Roku platforms are not included in this metric. Additionally, smart home products do not contribute to our streaming hours. We report streaming hours on a calendar basis.

Additionally, we believe that over time, increasing user engagement on our streaming platform increases our platform monetization because we earn platform revenue from various forms of user engagement, including advertising, as well as revenue shares from subscriptions and transactional video on-demand. However, our revenue from content publishers is not tied to the hours streamed on their streaming channels, and the number of streaming hours does not correlate to revenue earned from such content publishers or ARPU on a period-by-period basis. Moreover, streaming hours on our platform are measured whenever a streaming device 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 continue to play 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.

Since the first quarter of 2020, all of our Roku streaming devices include a Roku OS feature that is designed to identify when content has been continuously streaming on a channel for an extended period of time without user interaction. This feature, which we refer to as “Are you still watching,” periodically prompts the user to confirm that they are still watching the selected channel and closes the channel if the user does not respond affirmatively. We believe that the implementation of this feature across the Roku platform benefits us, our customers, channel partners, and advertisers. Some of our leading channel partners, including Netflix, also have implemented similar features within their channels. This Roku OS feature supplements these channel features. This feature has not had and is not expected to have a material impact on our future financial performance.

We streamed 87.4 billion and 73.2 billion hours during the years ended December 31, 2022 and 2021, respectively reflecting an increase of 19%.

Average Revenue per User

We measure our platform monetization progress with ARPU, which we believe represents the inherent value of our business. We define ARPU as our platform revenue for the trailing four quarters divided by the average of the number of active accounts at the end of the current period and the end of the corresponding period in the prior year. ARPU measures the rate at which we are monetizing our active account base and the progress of our platform business.

ARPU was \$41.68 as of December 31, 2022 as compared to \$40.67 as of December 31, 2021, reflecting an increase of 2%.

Components of Results of Operations

Revenue

Platform Revenue

We generate platform revenue from digital advertising sales and related services including our demand-side ad platform and content distribution services such as subscription and transaction revenue sharing arrangements, media and entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls. Our ad inventory includes video ad inventory from AVOD content in The Roku Channel, native display ads on our home screen and screen saver, as well as ad inventory we obtain through our content distribution agreements with publishers. To supplement supply, we re-sell video inventory that we purchase from content publishers and, to a lesser extent, directly sell third-party inventory on a revenue share basis. To date, we have generated most of our platform revenue in the United States.

Devices Revenue

We generate devices revenue from the sale of streaming players and other devices such as audio products, smart home products and accessories through consumer retail distribution channels and online retailers. Our devices revenue also includes licensing arrangements with service operators and licensed Roku TV partners. We generate most of our devices revenue in the United States. In our international markets, we primarily sell our devices through wholesale distributors which, in turn, re-sell to retailers.

Cost of Revenue

Cost of Revenue, Platform

Cost of revenue, platform primarily consists of costs associated with acquiring advertising inventory and amortization costs of content, both licensed and produced, and revenue share with content publishers. Cost of revenue, platform also includes other costs such as payment processing fees, allocated expenses associated with the delivery of our services that primarily include costs of third-party cloud services and salaries, benefits, and stock-based compensation for our customer support and platform operations personnel, and amortization of acquired developed technology.

Cost of Revenue, Devices

Cost of revenue, devices is comprised mostly of manufacturing costs payable to third party manufacturers for devices we sell which include streaming players, audio products and smart home products. Cost of revenue, devices also includes technology licenses or royalty fees on devices we sell or license, inbound and outbound freight, duty and logistics costs, third-party packaging, inventory provisions, and allocated overhead costs related to facilities, customer support, and salaries, benefits, and stock-based compensation for operations personnel.

Operating and Other Expenses

Research and Development

Research and development expenses consist primarily of personnel-related costs, including salaries, benefits, and stock-based compensation for our development teams as well as outsourced development fees. In addition, research and development expenses include allocated facilities and overhead costs. We expect research and development expenses to increase in absolute dollars as we continue to invest in the development of our platform and devices products and services.

Sales and Marketing

Sales and marketing expenses consist primarily of personnel-related costs, including salaries, benefits, commissions, and stock-based compensation for our employees engaged in sales and sales support, marketing, communications, data science and analytics, business development, product management, and partner support functions. Sales and marketing expenses also include marketing, retail and merchandising costs, and allocated facilities and overhead expenses. We expect sales and marketing expenses to increase in absolute dollars in future periods as we focus on growing active accounts, platform and devices revenue, and expanding our business internationally.

General and Administrative

General and administrative expenses consist primarily of salaries, benefits, and stock-based compensation for our finance, legal, information technology, human resources, and other administrative personnel. General and administrative expenses also include outside legal, accounting, and other professional service fees as well as allocated facility and overhead expenses. We expect our general and administrative expenses to increase in absolute dollars due to the expansion of our business and related infrastructure.

Other Income (Expense), Net

For the years ended December 31, 2022 and 2021, other income (expense), net consists of interest income on cash and cash equivalents, income recognized related to non-cash consideration associated with the delivery of services as part of a strategic commercial arrangement, interest expense that includes interest on our debt and amortization of deferred debt costs, foreign currency re-measurement, and transaction gains and losses. For the year ended December 31, 2022, other income (expense), net also includes the change in the fair value of the strategic investment.

Income Tax Expense (Benefit)

Our income tax expense (benefit) consists primarily of income taxes in certain foreign jurisdictions where we conduct business and income taxes in the United States. We have a full valuation allowance for deferred tax assets, including net operating losses primarily for the U.S. and any jurisdiction where we do not expect to realize their benefits in the future. 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.

	Years Ended December 31,		
	2022	2021	2020
Net Revenue:			
Platform	87 %	82 %	70 %
Devices	13 %	18 %	30 %
Total net revenue	100 %	100 %	100 %
Cost of Revenue:			
Platform	38 %	30 %	28 %
Devices	16 %	19 %	27 %
Total cost of revenue	54 %	49 %	55 %
Gross Profit (Loss):			
Platform	49 %	52 %	42 %
Devices	(3)%	(1)%	3 %
Total gross profit	46 %	51 %	45 %
Operating Expenses:			
Research and development	25 %	17 %	20 %
Sales and marketing	27 %	16 %	17 %
General and administrative	11 %	9 %	10 %
Total operating expenses	63 %	42 %	47 %
Income (Loss) from Operations	(17)%	9 %	(2)%
Other Income (Expense), Net:			
Interest expense	— %	— %	— %
Other income (expense), net	1 %	— %	— %
Total other income (expense), net	1 %	— %	— %
Income (Loss) Before Income Taxes	(16)%	9 %	(2)%
Income tax expense (benefit)	— %	— %	— %
Net Income (Loss)	(16)%	9 %	(2)%

Comparison of Years Ended December 31, 2022 and 2021

Net Revenue

	Years Ended December 31,		Change \$	Change %
	2022	2021		
<i>(in thousands, except percentages)</i>				
Platform	\$ 2,711,441	\$ 2,264,920	\$ 446,521	20 %
Devices	415,093	499,664	(84,571)	(17)%
Total net revenue	<u>\$ 3,126,534</u>	<u>\$ 2,764,584</u>	<u>\$ 361,950</u>	<u>13 %</u>

Platform

Platform revenue increased by \$446.5 million, or 20%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021, primarily attributable to higher advertising revenue which includes revenue from our demand-side ad platform as well as higher content distribution services, including higher revenue from media and entertainment promotional spending and Premium Subscriptions.

Devices

Devices revenue decreased by \$84.6 million, or 17%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021, primarily due to a decrease in both the volume of streaming players sold and average selling prices. During the year ended December 31, 2022, the volume of streaming players sold decreased by 14% and the average selling price of streaming players decreased by 5% as compared to the year ended December 31, 2021. We believe the decrease in the volume of streaming players sold is due to a reduction in consumer discretionary spend as a result of inflationary pressures. The decrease in the average selling price is due to higher promotions during the year ended December 31, 2022 as compared to the year ended December 31, 2021 where the volume was aided by the COVID-19 pandemic and required fewer promotions. The slowdown in growth also impacted the revenue from sale of audio products and revenue from licensing arrangements with service operators and licensed Roku TV partners which was slightly offset by revenue from sale of accessories and smart home products.

Cost of Revenue

	Years Ended December 31,		Change \$	Change %
	2022	2021		
<i>(in thousands, except percentages)</i>				
Cost of Revenue:				
Platform	\$ 1,179,675	\$ 818,506	\$ 361,169	44 %
Devices	505,737	537,478	(31,741)	(6)%
Total cost of revenue	<u>\$ 1,685,412</u>	<u>\$ 1,355,984</u>	<u>\$ 329,428</u>	<u>24 %</u>
Gross Profit (Loss):				
Platform	\$ 1,531,766	\$ 1,446,414	\$ 85,352	6 %
Devices	(90,644)	(37,814)	(52,830)	140 %
Total gross profit	<u>\$ 1,441,122</u>	<u>\$ 1,408,600</u>	<u>\$ 32,522</u>	<u>2 %</u>

Platform

The cost of revenue, platform increased by \$361.2 million, or 44%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. This increase is primarily driven by higher advertising inventory costs, higher content amortization costs, Premium Subscription costs, and credit card processing fees all totaling \$293.4 million. Platform costs increased an additional \$67.3 million due to higher personnel costs and increases in cloud services costs for supporting the platform.

Gross profit for the platform segment increased by \$85.4 million, or 6%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021, primarily driven by the overall growth in our platform revenue.

Devices

The cost of revenue, devices decreased by \$31.7 million, or 6%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. The decrease is primarily due to lower cost of revenue of \$25.2 million due to a decrease in the volume of streaming players sold, a decrease in royalty expenses of \$6.2 million and a decrease in freight costs of \$4.1 million, offset by an increase in inventory reserve, purchase commitment losses and reduction in supplier rebates totaling \$5.7 million.

Gross loss for the devices segment increased by \$52.8 million, or 140%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. We believe the gross loss was driven by lower devices revenue due to overall decrease in consumer spending combined with disruptions in the global supply chain driving component prices higher in 2022 as compared to 2021. We expect to incur negative gross margin in the devices segment in the near future as we continue to insulate consumers from price increases and incur costs from expected promotional activities related to new product launches.

Operating Expenses

	Years Ended December 31,		Change \$	Change %
	2022	2021		
(in thousands, except percentages)				
Research and development	\$ 788,913	\$ 461,602	\$ 327,311	71 %
Sales and marketing	838,419	455,601	382,818	84 %
General and administrative	344,678	256,297	88,381	34 %
Total operating expenses	<u>\$ 1,972,010</u>	<u>\$ 1,173,500</u>	<u>\$ 798,510</u>	<u>68 %</u>

Research and development

Research and development expenses increased by \$327.3 million, or 71%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. The increase is primarily due to increases in personnel-related costs of \$241.1 million as a result of increased engineering headcount and related stock-based compensation, an increase in facilities costs of \$52.7 million due to expansion of office spaces and IT infrastructure, an increase of \$19.6 million related to restructuring charges, and higher consulting, professional services, and cloud services costs of \$13.4 million.

Sales and marketing

Sales and marketing expenses increased by \$382.8 million, or 84%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. The increase is primarily due to increases in personnel-related costs of \$172.7 million related to increased headcount and related stock-based compensation in sales and sales support, product management, marketing, and business analytics to support efforts to grow our business. Sales and marketing expenses also include an increase of \$160.0 million mainly due to increases in marketing, retail and merchandising costs and general sales promotions, an increase in facilities costs of \$20.9 million due to expansion of office spaces and IT infrastructure, an increase of \$11.0 million in professional services and consulting fees, and an increase of \$10.9 million related to restructuring charges.

General and administrative

General and administrative expenses increased by \$88.4 million, or 34%, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. The increase is primarily due to increases in personnel-related costs of \$72.5 million related to increased headcount and related stock-based compensation, an increase in facilities costs of \$16.2 million due to expansion of office spaces and IT infrastructure, an increase of \$7.6 million related to restructuring charges, a net increase of \$4.6 million related to higher travel expenses, an increase in credit losses and higher general overhead, offset by a decrease of \$11.2 million related to lower legal expenses, consulting, and professional services fees.

Other Income (Expense), Net

	Years Ended December 31,		Change \$	Change %
	2022	2021		
(in thousands, except percentages)				
Interest expense	\$ (5,161)	\$ (2,980)	\$ (2,181)	73 %
Other income (expense), net	43,766	4,467	39,299	880 %
Total other income (expense), net	<u>\$ 38,605</u>	<u>\$ 1,487</u>	<u>\$ 37,118</u>	<u>n/m</u>

Other income (expense), net

Total other income (expense), net, increased by \$37.1 million, during the year ended December 31, 2022 as compared to the year ended December 31, 2021. The increase was primarily driven by an increase in interest income of \$31.8 million from higher interest rates on our cash balances during the period, foreign exchange net gain of \$9.4 million from a stronger dollar on remeasurement of our foreign currency denominated assets and liabilities, offset by higher interest expense of \$2.2 million.

Income Tax Expense (Benefit)

	Years Ended December 31,		Change \$	Change %
	2022	2021		
(in thousands, except percentages)				
Income tax expense (benefit)	<u>\$ 5,722</u>	<u>\$ (5,798)</u>	<u>\$ 11,520</u>	<u>(199)%</u>

Income tax expense (benefit)

Income tax expense of \$5.7 million for the year ended December 31, 2022 was driven by increases in foreign taxes and increases in U.S. taxes from the capitalization of research and development expenses effective January 1, 2022 as part of the Tax Cuts and Jobs Act of 2017.

Income tax benefit of \$5.8 million for the year ended December 31, 2021 was driven primarily by stock-based compensation excess tax benefits, increased losses in a foreign jurisdiction with no valuation allowance, and a tax rate change in a foreign jurisdiction.

Liquidity and Capital Resources

As of December 31, 2022, we had cash and cash equivalents of \$1,962.0 million. Less than 2% of our cash was held outside the United States in accounts held by our foreign subsidiaries, which are used to fund foreign operations.

Our primary sources of cash are receipts from platform and devices revenue and proceeds from equity sales, including equity issued pursuant to our employee equity incentive plans. The primary uses of cash are costs of revenue including costs to acquire advertising inventory, costs to license and produce content, third-party manufacturing costs for our products, as well as operating expenses including payroll-related expenses, consulting and professional service fees, and facility and marketing expenses. Other uses of cash include purchases of property and equipment and mergers and acquisitions.

We expect to continue to incur expenses for facility and building related costs for our office locations in the United States and internationally. In addition, we expect to continue our investments in purchases of computer systems and other property and equipment. We have pursued merger and acquisition activities in the past, such as the acquisition of the Nielsen AVA business, the This Old House business, and content rights from Quibi in fiscal 2021, and we may pursue additional merger and acquisition activities in the future, including the acquisition of rights to programming and content assets. These activities can materially impact our liquidity and capital resources.

We believe our existing cash and cash equivalents balance and cash flow from operations will be sufficient to meet our working capital, capital expenditures, and material cash requirements from known contractual obligations for the next twelve months and beyond. Our future capital requirements, the adequacy of available funds, and cash flows from operations could be affected by various risks and uncertainties, including, but not limited to, those detailed in Part I, Item 1A, Risk Factors in this Annual Report and the effects of the current macroeconomic environment. While the

current macroeconomic environment has not severely impacted our liquidity and capital resources to date, it has contributed to disruption and volatility in local economies and in capital and credit markets, which could adversely affect our liquidity and capital resources in the future.

We may attempt to raise additional capital through the sale of equity securities or other financing arrangements. If we raise additional funds by issuing equity, the ownership of our existing stockholders will be diluted. Our Credit Facility (described below) matures in February 2023, upon which we expect to pay off the remaining balance of \$80.0 million. If we raise additional financing by the incurrence of additional indebtedness, we may be subject to fixed payment obligations and also to restrictive covenants. Additionally, due to the current macroeconomic environment, we may be unable to obtain debt financing on terms that are acceptable to us.

At-the-Market Offering

On March 2, 2021, we entered into an Equity Distribution Agreement with Morgan Stanley & Co. LLC, Citigroup Global Markets Inc., and Evercore Group L.L.C., as our sales agents, pursuant to which we could offer and sell from time-to-time shares of our Class A common stock for aggregate gross proceeds of up to \$1,000.0 million. In March 2021, we sold approximately 2.6 million shares of Class A common stock at an average selling price of \$379.26 per share, for aggregate gross proceeds of \$1,000.0 million and incurred issuance costs of \$10.4 million.

Senior Secured Term Loan A and Revolving Credit Facilities

On February 19, 2019, we entered into a Credit Agreement with Morgan Stanley Senior Funding, Inc. (as amended on May 3, 2019, the “Credit Agreement”), which provides for (i) a four-year revolving credit facility in the aggregate principal amount of up to \$100.0 million (the “Revolving Credit Facility”), (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$100.0 million (the “Term Loan A Facility”), and (iii) an uncommitted incremental facility subject to certain conditions (together with the Revolving Credit Facility and the Term Loan A Facility, collectively, the “Credit Facility”).

For our current borrowings, we have elected a Eurodollar borrowing with interest at a rate equal to the adjusted one-month LIBOR rate plus an applicable margin of 1.75% based on our secured leverage ratio. The borrowings under the facility will be repaid in full in February 2023. Our obligations under the Credit Agreement are secured by substantially all of our assets. The Credit Agreement contains customary representations and warranties, customary affirmative and negative covenants, a financial covenant that is tested quarterly and requires us to maintain a certain adjusted quick ratio of at least 1.00 to 1.00, and customary events of default. As of December 31, 2022, we were in compliance with all of the covenants of the Credit Agreement. See Note 11 to the consolidated financial statements in Item 8 of this Annual Report for additional details regarding the Credit Agreement.

We had outstanding letters of credit of \$37.7 million and \$38.0 million as of December 31, 2022 and 2021, respectively, against the Revolving Credit Facility. Upon maturity of the Credit Facility, we expect to roll over the outstanding letters of credit into a new, cash secured, bilateral facility. We expect this to require the use of approximately \$44 million of existing cash and cash equivalents to secure the outstanding letters of credit.

Cash Flows

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

	Years Ended December 31,	
	2022	2021
Consolidated Statements of Cash Flows Data:		
Cash flows provided by operating activities	\$ 11,795	\$ 228,081
Cash flows used in investing activities	\$ (201,696)	\$ (176,819)
Cash flows provided by financing activities	\$ 8,357	\$ 1,003,147

Cash Flows from Operating Activities

Our operating activities provided cash of \$11.8 million for the year ended December 31, 2022. Our net loss of \$498.0 million for the year ended December 31, 2022 was adjusted by non-cash charges of \$700.1 million comprised mainly of stock-based compensation, amortization of content assets, depreciation and amortization on property and equipment and intangible assets, amortization of operating right-of-use assets, and impairment of certain intangible technology assets adjusted by net gains on remeasurement of foreign currency denominated assets and liabilities.

The changes in our operating assets and liabilities used cash totaling \$190.3 million mainly from an increase in content assets acquired and paid during the period, an increase in inventory on hand, an increase in prepaid expenses and accounts receivable balances offset by inflows from an increase in accounts payable and accrued liabilities and an increase in deferred revenue balances. These changes are mainly due to overall growth in the business combined with the timing of receipts from customers and payments to vendors.

Cash Flows from Investing Activities

Our investing activities for the year ended December 31, 2022 included cash outflows of \$201.7 million consisting of purchases of property and equipment and expenditures related to the expansion of our office facilities of \$161.7 million and the purchase of a strategic investment of \$40.0 million.

Cash Flows from Financing Activities

Our financing activities provided cash of \$8.4 million for the year ended December 31, 2022. We received cash proceeds of \$18.4 million from the exercise of employee stock options. These inflows were offset by \$10.0 million of repayments made on borrowings.

Material Cash Requirements from Known Contractual Obligations

Our material cash requirements from known contractual obligations as of December 31, 2022 consisted of:

- Principal payments related to our Term Loan A Facility that are included in our consolidated balance sheets and the related periodic interest payments. For additional information regarding the terms of the debt and interest payable, see Note 11 to the consolidated financial statements in Item 8 of this Annual Report.
- Commitments to purchase finished goods from our manufacturers and other inventory related items. Consistent with industry practices, we enter into firm, non-cancelable, and unconditional purchase commitments with our manufacturers to acquire products through a combination of purchase orders, supplier contracts, and open orders based on projected demand information. Our manufacturers source components and build our products based on these demand forecasts. Changes to projected demand or in the subsequent sales mix of our products may result in us being committed to purchase excess inventory to satisfy these commitments. For additional information regarding manufacturing purchase commitments, see Note 13 to the consolidated financial statements in Item 8 of this Annual Report.
- Commitments to license content from content publishers and produce content under contractual arrangements. For additional information regarding content commitments, see Note 13 to the consolidated financial statements in Item 8 of this Annual Report.
- Operating lease liabilities that are included in our consolidated balance sheets and liabilities related to the lease arrangements that have not yet commenced. For additional information regarding our lease liabilities, see Note 10 to the consolidated financial statements in Item 8 of this Annual Report.

The contractual commitments discussed 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 above.

In addition, we have \$6.1 million of uncertain tax positions as of December 31, 2022. We adjust these positions when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. We are unable to accurately predict when these amounts will be realized or released. Although we believe we have adequately provided for our uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be materially different.

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. These estimates and assumptions 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. We evaluate our estimates and assumptions on an ongoing basis. 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

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations requires significant judgment.

Judgment is required to determine the stand-alone selling price (“SSP”) for each distinct performance obligation. 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 using information that may include market conditions and other observable inputs.

To the extent platform services are part of multiple element arrangements, 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.

For the sale of third-party goods and services, we evaluate whether we are the principal, and report revenue on a gross basis, or an agent, and report revenue on a net basis. In this assessment, we consider if we obtain control of the specified goods or services before they are transferred to the customer, as well as other indicators such as the party primarily responsible for fulfillment, inventory risk, and discretion in establishing price.

Our devices 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. We provide unspecified upgrades and updates to our devices end users. We record the allocated value of these as deferred revenue and recognize it ratably on a time elapsed basis over the estimated economic life of the associated devices. Shipping charges billed to customers are included in revenue and the related shipping costs are included in cost of revenue.

Business Combinations

We recognize, separately from goodwill, identifiable assets and liabilities acquired in a business combination at fair value on the date of acquisition. We use our best estimates and assumptions to accurately assign fair value to the tangible and identifiable intangible assets acquired and liabilities assumed at the acquisition date as well as the useful lives of those acquired intangible assets. Examples of critical estimates in valuing certain of the intangible assets and goodwill we have acquired include, but are not limited to, future expected cash inflows and outflows, expected technology life cycle, attrition rates of customers, and discount rates. We estimate the useful lives of the intangible assets based on the expected period over which we anticipate generating economic benefit from the asset. Unanticipated events and circumstances may occur that may affect the accuracy or validity of such assumptions, estimates or actual results.

While we use our best estimates and assumptions as part of the purchase price allocation process to accurately value assets and liabilities acquired, these estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, we record adjustments to consideration transferred, and the assets and liabilities acquired, with the corresponding offset to goodwill to the extent we identify adjustments to the preliminary purchase price allocation. Upon the conclusion of the measurement period or final determination of the values of consideration transferred, and assets and liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

Impairment of Intangible Assets

We identify intangible assets acquired in a business combination and determine their fair value. The determination involves certain judgments and estimates. These judgments include, but are not limited to, the cash flows that an asset is expected to generate in the future and the appropriate discount rate. We amortize purchased-intangible assets on a straight-line basis over the estimated useful life of the assets. We review purchased-intangible assets whenever events or changes in circumstances indicate that the useful life is shorter than we had originally estimated, or that the carrying amount of the asset group to which it relates may not be recoverable. If such facts and circumstances indicate an asset group’s carrying amount may not be recoverable, we assess the recoverability of purchased-intangible assets by comparing the projected undiscounted net cash flows associated with the asset group against their respective carrying amounts. Impairment, if any, is based on the excess of the carrying amount over the fair value of these asset

groups. If the useful life of the asset is shorter than originally estimated, we accelerate the rate of amortization and amortize the remaining carrying value over the new shorter useful life.

Allowances for Sales Returns and Sales Incentives

Accounts receivable are stated at invoice value less estimated allowances that include allowance for sales returns and sales incentives. We perform an ongoing analysis of various factors including our historical experience, promotional programs, claims to date, and other business factors to determine the allowances for sales returns and sales incentives. If our estimates regarding accounts receivable allowances differ from the actual results, the losses or gains could be material.

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 the U.S. and Netherlands 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 the U.S. and Netherlands net operating losses and other deferred tax assets. In order to assess the likelihood that we will recover our deferred tax assets against future sources of taxable income, we review the level of positive and negative evidence of future taxable income which is a critical estimate.

Recent Accounting Pronouncements

The recent accounting pronouncements adopted during the year ended December 31, 2022 and those not yet adopted are discussed and included in Note 2 to the consolidated financial statements in Item 8 of this Annual Report. They are incorporated herein by reference.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Fluctuation Risk

Our exposure to interest rate risk relates to the interest income generated by cash, cash equivalents, and interest expense on the Credit Facility. The primary objective of our investment policy is to preserve principal while maximizing income without significantly increasing risk. We do not believe that an increase or decrease in interest rates of 100 basis points would have a material effect on our operating results or financial condition. As of December 31, 2022, borrowings under the Term Loan A Facility totaled \$80.0 million with an effective interest rate of 4.4%. If the amount outstanding under our Term Loan A Facility remains at this level for an entire year and interest rates increased or decreased by 100 basis points, our annual interest expense would increase or decrease, respectively, by an additional \$0.8 million.

Foreign Currency Exchange Rate Risk

Most of our revenue is generated within the United States and as such we have minimal foreign currency risk related to our revenue. Our foreign currency risk primarily relates to operating expenses, cash balances and lease liabilities denominated in currencies other than U.S. dollars, primarily British pounds and Euros. Our results of current and future operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates.

We have experienced and will continue to experience fluctuations in our net income as a result of transaction gains or losses related to revaluing monetary asset and liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. We have not entered into any derivatives or other financial instruments in an attempt to hedge our foreign currency exchange risk, but we may do so in the future.

Item 8. Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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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, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, 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, 2022, 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 February 16, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition - Variable Consideration Determination of Content Distribution Services and Branded Channel Buttons – Refer to Note 2 to the financial statements

Critical Audit Matter Description

As part of the Company's revenue recognition for its arrangements with content publishers, management is required to estimate variable consideration from transactional revenue sharing related to content distribution services and the sale of branded channel buttons on remote controls.

Variable consideration related to content distribution services and sale of branded channel buttons on remote controls ("content publisher arrangements") is included in the estimated transaction price based on the expected value for which a significant reversal of revenue is not expected to occur. For content distribution services, the estimate of the variable consideration is based on management's assessment of historical, current, and forecasted performance of the publisher's applications. For the sale of branded channel buttons on remote controls, the estimate of the variable consideration is based on management's assessment of historical, current, and forecasted player sales volumes.

We identified the revenue forecasts relating to content publisher arrangements as a critical audit matter due to the significant judgment necessary to estimate variable consideration. Such estimates required a high degree of auditor judgment and an increased extent of effort relative to evaluating the reasonableness of management's estimates and assumptions related to the forecasts of variable consideration.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to management's forecast used in the determination of future variable consideration included the following, among others:

- We tested the effectiveness of controls over management's forecasting process related to content distribution services and sale of branded channel buttons on remote controls.
- We selected a sample of revenue arrangements with variable consideration and performed the following:
 - Obtained contractual documents for each selection, including master agreements and other related documents.
 - Analyzed the contractual documents to determine if all arrangement terms that may have an impact on revenue recognition were identified and properly considered in the evaluation of the accounting for the contract, including terms and conditions for transactional revenue sharing.
 - Performed inquiries with applicable individuals in the Company's finance, operations, and sales departments regarding the estimates for content distribution services and sales of branded channel buttons on remote controls.
 - Tested management's accuracy of forecasting by comparing the historical forecasts of consideration to actual consideration received.
 - Evaluated changes from prior period forecasts to current period forecasts, when applicable.
 - Tested the mathematical accuracy of the compilation of the forecasts.
 - We considered the existence of contradictory evidence based on reading of internal communication to management, Company press releases, industry reports, publicly available information related to publishers' content applications as well as our observations and inquiries as to the changes within the business and considerations of macroeconomic and industry factors.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

February 16, 2023

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

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

	As of December 31,	
	2022	2021
Assets		
Current Assets:		
Cash and cash equivalents	\$ 1,961,956	\$ 2,146,043
Accounts receivable, net of allowances of \$40,191 and \$56,827 as of December 31, 2022 and 2021, respectively	760,793	752,393
Inventories	106,747	50,276
Prepaid expenses and other current assets	135,383	105,795
Total current assets	<u>2,964,879</u>	<u>3,054,507</u>
Property and equipment, net	335,031	177,567
Operating lease right-of-use assets	521,695	345,660
Content assets, net	292,766	223,713
Intangible assets, net	58,881	84,126
Goodwill	161,519	161,519
Other non-current assets	77,830	35,053
Total Assets	<u>\$ 4,412,601</u>	<u>\$ 4,082,145</u>
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 164,800	\$ 124,921
Accrued liabilities	750,810	549,055
Current portion of long-term debt	79,985	9,883
Deferred revenue, current portion	87,678	45,760
Total current liabilities	<u>1,083,273</u>	<u>729,619</u>
Long-term debt, non-current portion	—	79,985
Deferred revenue, non-current portion	28,210	28,726
Operating lease liability, non-current portion	584,651	394,724
Other long-term liabilities	69,911	82,485
Total Liabilities	<u>1,766,045</u>	<u>1,315,539</u>
Commitments and contingencies (Note 13)		
Stockholders' Equity:		
Common stock, \$0.0001 par value;	14	14
1,150,000 (Class A - 1,000,000 and Class B - 150,000) shares authorized as of December 31, 2022 and 2021;		
140,027 (Class A - 122,602 and Class B - 17,425) shares and 135,137 (Class A - 118,767 and Class B - 16,370) shares issued and outstanding as of December 31, 2022 and 2021, respectively		
Additional paid-in capital	3,234,860	2,856,572
Accumulated other comprehensive income (loss)	(292)	41
Accumulated deficit	(588,026)	(90,021)
Total stockholders' equity	<u>2,646,556</u>	<u>2,766,606</u>
Total Liabilities and Stockholders' Equity	<u>\$ 4,412,601</u>	<u>\$ 4,082,145</u>

See accompanying Notes to Consolidated Financial Statements

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

	Years Ended December 31,		
	2022	2021	2020
Net Revenue:			
Platform	\$ 2,711,441	\$ 2,264,920	\$ 1,247,654
Devices	415,093	499,664	530,734
Total net revenue	<u>3,126,534</u>	<u>2,764,584</u>	<u>1,778,388</u>
Cost of Revenue:			
Platform	1,179,675	818,506	499,520
Devices	505,737	537,478	470,649
Total cost of revenue	<u>1,685,412</u>	<u>1,355,984</u>	<u>970,169</u>
Gross Profit (Loss):			
Platform	1,531,766	1,446,414	748,134
Devices	(90,644)	(37,814)	60,085
Total gross profit	<u>1,441,122</u>	<u>1,408,600</u>	<u>808,219</u>
Operating Expenses:			
Research and development	788,913	461,602	355,784
Sales and marketing	838,419	455,601	299,457
General and administrative	344,678	256,297	173,231
Total operating expenses	<u>1,972,010</u>	<u>1,173,500</u>	<u>828,472</u>
Income (Loss) from Operations	<u>(530,888)</u>	<u>235,100</u>	<u>(20,253)</u>
Other Income (Expense), Net:			
Interest expense	(5,161)	(2,980)	(3,432)
Other income (expense), net	43,766	4,467	5,233
Total other income (expense), net	<u>38,605</u>	<u>1,487</u>	<u>1,801</u>
Income (Loss) Before Income Taxes	<u>(492,283)</u>	<u>236,587</u>	<u>(18,452)</u>
Income tax expense (benefit)	5,722	(5,798)	(945)
Net Income (Loss)	<u>\$ (498,005)</u>	<u>\$ 242,385</u>	<u>\$ (17,507)</u>
Net income (loss) per share — basic	<u>\$ (3.62)</u>	<u>\$ 1.83</u>	<u>\$ (0.14)</u>
Net income (loss) per share — diluted	<u>\$ (3.62)</u>	<u>\$ 1.71</u>	<u>\$ (0.14)</u>
Weighted-average common shares outstanding — basic	<u>137,668</u>	<u>132,710</u>	<u>123,978</u>
Weighted-average common shares outstanding — diluted	<u>137,668</u>	<u>141,668</u>	<u>123,978</u>

See accompanying Notes to Consolidated Financial Statements

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

	Years Ended December 31,		
	2022	2021	2020
Net Income (Loss)	\$ (498,005)	\$ 242,385	\$ (17,507)
Other comprehensive gain (loss), net of tax:			
Foreign currency translation adjustment	(333)	12	—
Other comprehensive gain (loss), net of tax	(333)	12	—
Comprehensive Income (Loss)	\$ (498,338)	\$ 242,397	\$ (17,507)

See accompanying Notes to Consolidated Financial Statements

ROKU, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (in thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance-December 31, 2019	119,897	\$ 12	\$ 1,012,218	\$ 29	\$ (313,833)	\$ 698,426
Vesting of early exercised stock options	—	—	38	—	—	38
Issuance of common stock pursuant to equity incentive plans	4,107	1	16,805	—	—	16,806
Issuance of common stock in connection with at-the-market offering, net of issuance costs of \$6,800	4,000	—	497,242	—	—	497,242
Stock-based compensation expense	—	—	134,076	—	—	134,076
Adoption of ASU 2016-13	—	—	—	—	(1,066)	(1,066)
Net loss	—	—	—	—	(17,507)	(17,507)
Balance-December 31, 2020	128,004	13	1,660,379	29	(332,406)	1,328,015
Vesting of early exercised stock options	—	—	4	—	—	4
Issuance of common stock pursuant to equity incentive plans	4,496	1	18,531	—	—	18,532
Issuance of common stock in connection with at-the-market offering, net of issuance costs of \$10,400	2,637	—	989,615	—	—	989,615
Stock-based compensation expense	—	—	188,043	—	—	188,043
Foreign currency translation adjustment	—	—	—	12	—	12
Net income	—	—	—	—	242,385	242,385
Balance-December 31, 2021	135,137	14	2,856,572	41	(90,021)	2,766,606
Issuance of common stock pursuant to equity incentive plans	4,890	—	18,357	—	—	18,357
Stock-based compensation expense	—	—	359,931	—	—	359,931
Foreign currency translation adjustment	—	—	—	(333)	—	(333)
Net loss	—	—	—	—	(498,005)	(498,005)
Balance-December 31, 2022	140,027	\$ 14	\$ 3,234,860	\$ (292)	\$ (588,026)	\$ 2,646,556

See accompanying Notes to Consolidated Financial Statements

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

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ (498,005)	\$ 242,385	\$ (17,507)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	48,651	42,621	36,206
Stock-based compensation expense	359,931	187,532	134,076
Amortization of right-of-use assets	55,507	31,024	28,743
Amortization of content assets	234,355	95,570	22,392
Foreign currency remeasurement (gains) losses	(8,230)	—	—
Change in fair value of strategic investment	532	—	—
Impairment of intangible assets	7,500	—	—
Provision for (recoveries of) doubtful accounts	2,081	(904)	3,801
Other items, net	(190)	(101)	524
Changes in operating assets and liabilities:			
Accounts receivable	(10,887)	(221,768)	(196,046)
Inventories	(56,471)	3,619	(4,181)
Prepaid expenses and other current assets	(15,941)	(48,074)	(3,450)
Content assets and liabilities, net	(313,204)	(193,440)	(22,721)
Other non-current assets	(7,304)	(19,335)	(1,128)
Accounts payable	14,190	8,428	6,410
Accrued liabilities	167,526	128,931	127,319
Operating lease liabilities	(9,245)	(20,083)	12,999
Other long-term liabilities	(403)	(1,100)	(762)
Deferred revenue	41,402	(7,224)	21,517
Net cash provided by operating activities	<u>11,795</u>	<u>228,081</u>	<u>148,192</u>
Cash flows from investing activities:			
Purchases of property and equipment	(161,696)	(40,041)	(82,382)
Acquisition of businesses, net of cash acquired	—	(136,778)	—
Proceeds from escrows associated with acquisition	—	—	1,058
Purchase of strategic investment	(40,000)	—	—
Net cash used in investing activities	<u>(201,696)</u>	<u>(176,819)</u>	<u>(81,324)</u>
Cash flows from financing activities:			
Proceeds from borrowings, net of issuance costs	—	—	69,325
Repayments of borrowings	(10,000)	(5,000)	(74,325)
Proceeds from equity issued under incentive plans	18,357	18,532	16,806
Proceeds from equity issued under at-the-market offerings, net of offering costs	—	989,615	497,242
Net cash provided by financing activities	<u>8,357</u>	<u>1,003,147</u>	<u>509,048</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	(181,544)	1,054,409	575,916
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(4,170)	12	—
Cash, cash equivalents and restricted cash —Beginning of period	<u>2,147,670</u>	<u>1,093,249</u>	<u>517,333</u>
Cash, cash equivalents and restricted cash —End of period	<u>\$ 1,961,956</u>	<u>\$ 2,147,670</u>	<u>\$ 1,093,249</u>
Cash, cash equivalents and restricted cash at end of period:			
Cash and cash equivalents	1,961,956	2,146,043	1,092,815
Restricted cash, current	—	—	434
Restricted cash, non-current	—	1,627	—
Cash, cash equivalents and restricted cash —End of period	<u>\$ 1,961,956</u>	<u>\$ 2,147,670</u>	<u>\$ 1,093,249</u>

	Years Ended December 31,		
	2022	2021	2020
Supplemental disclosures of cash flow information:			
Cash paid for interest	\$ 3,894	\$ 2,578	\$ 3,470
Cash paid for income taxes	\$ 7,016	\$ 1,363	\$ 1,014
Supplemental disclosures of non-cash investing and financing			
Non-cash consideration for business combination	\$ —	\$ 21,400	\$ —
Services to be received as part of a business combination	\$ —	\$ 6,500	\$ —
Unpaid portion of property and equipment purchases	\$ 28,503	\$ 3,073	\$ 1,242

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 operates in two reportable segments and generates platform revenue from the sale of digital advertising and related services including demand-side platform and content distribution services such as subscription and transaction revenue shares, media and entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls. The Company generates device revenue from the sale of streaming players, audio products, smart home products and licensing arrangements with service operators and licensed Roku TV partners.

2. SIGNIFICANT ACCOUNTING POLICIES AND BASIS OF PRESENTATION

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 (“U.S. GAAP”). All intercompany accounts and transactions have been eliminated in consolidation.

Reorganization of Reportable Segments and Reclassification of Prior Year Presentation

Effective as of the fourth quarter of fiscal 2022, the Company reorganized its reportable segments to better align with management’s reporting of information reviewed by the CODM for each segment. The Company renamed the player segment to the devices segment which now includes licensing arrangements with service operators and licensed Roku TV partners in addition to sales of streaming players, audio products and smart home products. All financial information, current and historical, has been recast based on the reorganized segments to conform to the new presentation in the financial statements and accompanying notes. See Note 18 for additional details.

In addition to the prior period amounts related to segment reorganization discussed above, certain other prior period amounts in the consolidated financial statements and accompanying notes have also been reclassified to conform to the current period presentation.

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, liabilities, net revenue, and expenses. Significant items subject to such estimates and assumptions include:

- revenue recognition: determining the nature and timing of satisfaction of performance obligations, variable consideration, determining the stand-alone selling prices of performance obligations, gross versus net revenue recognition, and evaluation of customer versus vendor relationships;
- the impairment of intangible assets;
- amortization of content assets;
- valuation of assets acquired and liabilities assumed in connection with business combinations;
- valuation of strategic investments;
- useful lives of tangible and intangible assets;
- allowances for sales returns and sales incentives; and
- the valuation of deferred income tax assets.

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 and assumptions.

Comprehensive Income (Loss)

Comprehensive income (loss) for the year ended December 31, 2022 and December 31, 2021 includes foreign currency translation adjustments. Comprehensive loss is equal to the net loss for the year ended December 31, 2020.

Foreign Currency

The functional currency of some 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 exchange rates in effect at period-end and non-monetary assets and liabilities are remeasured at historical exchange rates. Revenue and expenses are remeasured at average exchange rates in effect during each period. Foreign currency gains or losses from remeasurement and transaction gains or losses are recorded as Other income (expense), net in the consolidated statements of operations. The Company recorded a foreign currency gain of \$8.2 million, loss of \$1.2 million, and gain of \$1.3 million during the years ended December 31, 2022, 2021, and 2020, respectively.

The Company also has some foreign subsidiaries which use local currency as their functional currency. The financial statements of these subsidiaries are translated to U.S. dollars using month-end exchange rates for assets and liabilities, and average exchange rates for revenue and expenses. Translation gains and losses are recorded in accumulated other comprehensive income (loss) as a component of stockholders' equity.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less at the date of purchase to be cash equivalents. Two financial institutions managed 26% and 21% of cash and cash equivalents as of December 31, 2022, and 30% and 27% as of December 31, 2021.

Accounts Receivable, net

Accounts receivable are typically unsecured and are derived from revenue earned from customers. They are stated at invoice value less estimated allowances for sales returns, sales incentives, doubtful accounts, and other miscellaneous allowances. The Company performs ongoing credit evaluations of its customers to determine allowances for potential credit losses and doubtful accounts. The Company considers historical experience, ongoing promotional activities, historical claim rates, and other factors to determine the allowances for sales returns and sales incentives.

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

	Years Ended December 31,		
	2022	2021	2020
Beginning balance	\$ 6,015	\$ 5,912	\$ 6,550
Add: Charged to revenue	19,068	16,181	14,594
Less: Utilization of sales return reserve	(17,666)	(16,078)	(15,232)
Ending balance	<u>\$ 7,417</u>	<u>\$ 6,015</u>	<u>\$ 5,912</u>

Allowance for Sales Incentives: Allowance for sales incentives consisted of the following activities (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Beginning balance	\$ 48,411	\$ 30,838	\$ 19,476
Add: Charged to revenue	94,731	90,530	68,315
Less: Utilization of sales incentive reserve	(114,239)	(72,957)	(56,953)
Ending balance	<u>\$ 28,903</u>	<u>\$ 48,411</u>	<u>\$ 30,838</u>

Allowance for Doubtful Accounts: Allowance for doubtful accounts consisted of the following activities (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Beginning balance	\$ 2,158	\$ 4,181	\$ 1,140
Impact of adoption of ASU 2016-13	—	—	1,066
Adjusted beginning balance	\$ 2,158	\$ 4,181	\$ 2,206
Provision for (recoveries of) doubtful accounts	2,081	(904)	3,801
Adjustments for write-off	(741)	(1,119)	(1,826)
Ending balance	\$ 3,498	\$ 2,158	\$ 4,181

The Company did not have any customer that individually accounted for more than 10% of its accounts receivable, net balance as of December 31, 2022 and 2021.

Business Combinations

The Company determines whether a transaction meets the definition of a business combination before applying the acquisition method of accounting to that transaction. The Company allocates the fair value of the purchase consideration of its acquisitions to the tangible and intangible assets acquired and liabilities assumed, based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of identifiable assets and liabilities is recorded as goodwill. The operating results of acquired businesses are included in the Company's consolidated statements of operations from their effective acquisition date. Acquisition-related expenses and certain acquisition restructuring and other related charges are recognized separately from the business combination and are expensed as incurred. Contingent consideration classified as a liability is recognized at fair value as of the acquisition date with subsequent fair value adjustments recorded in the consolidated statements of operations.

While the Company uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to consideration transferred, and the assets acquired and liabilities assumed with the corresponding offset to goodwill. In addition, uncertain tax positions and tax-related valuation allowances are initially recorded in connection with a business combination as of the acquisition date. The Company continues to collect information and reevaluates these estimates and assumptions and records any adjustments to the Company's preliminary estimates with a corresponding offset to goodwill during the measurement period. Upon the conclusion of the measurement period or final determination of the values of consideration transferred, and assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

Intangible Assets

Intangible assets acquired through business combinations are recorded at their fair values as of the acquisition date. Intangible assets are amortized using the straight-line method over their estimated useful lives. The Company evaluates the estimated remaining useful lives of its intangible assets annually and when events or changes in circumstances warrant a revision to the remaining periods of amortization.

Impairment Assessments

The Company evaluates goodwill for possible impairment at least annually during the fourth quarter of each fiscal year or more often, if and when circumstances indicate that goodwill may be impaired. This includes but is not limited to significant adverse changes in the business climate, market conditions, or other events that indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying value. In performing its annual assessment, the Company can opt to perform a qualitative assessment to test a reporting unit's goodwill for impairment or it can directly perform a quantitative assessment. Based on the Company's qualitative assessment, if it is determined that the fair value of the reporting unit is, more likely than not, less than its carrying amount, then the quantitative assessment is performed. Any excess of the reporting unit's carrying amount over its fair value is recorded as an impairment loss, limited to the total amount of goodwill allocated to the reporting unit.

The Company reviews long-lived assets and intangible assets with finite lives for impairment when events or changes in business circumstances indicate that the carrying amount of the asset or asset group may not be fully recoverable or that the useful lives of the asset or asset group are no longer appropriate. The Company assesses these asset or asset groups for impairment based on their estimated undiscounted future cash flows. If the carrying value of the asset or asset group exceeds the estimated future undiscounted cash flows, the Company recognizes an impairment loss based on the excess of the carrying amount over the fair value of the asset group.

The Company did not recognize any impairment for goodwill in any of the periods reported. During the year ended December 31, 2022, the Company recognized an impairment charge of \$7.5 million related to the abandonment of future development of certain technology assets. This action was taken as part of the restructuring announced in the fourth quarter of fiscal year 2022. See Note 15 for additional details. There were no impairments of intangible assets during the years ended December 31, 2021 and 2020.

Content Assets

The Company recognizes content assets (licensed and produced) as Content assets, net on the consolidated balance sheets. For licensed content, the cost per title is capitalized along with a corresponding liability when the license period begins, the content is available for streaming and when the fee is determinable. For produced content, all direct production costs are capitalized. Payment terms for certain licensed content require advanced payments which are reflected in Prepaid expenses and other current assets.

The amortization expense for content assets (licensed and produced) is based on projected usage which results in accelerated or straight-lined patterns depending on the nature of the content. Projected usage is mainly based on estimated viewing trends. Amortization of content assets is included in Cost of revenue, platform in the consolidated statements of operations.

Content assets (licensed and produced) are primarily monetized together as a unit, referred to as a film group. The film group is evaluated for impairment whenever an event occurs, or circumstances change, indicating the fair value is less than the carrying value. The Company reviews various qualitative factors and indicators to assess whether the film group is impaired. The Company did not recognize any impairment of content assets in any periods reported.

Revenue Recognition

Revenue is recognized upon transfer of control of promised goods or services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those goods or services. The Company's contracts include various product or services or a combination of both, which are generally capable of being distinct and are accounted for as separate performance obligations. The Company's contracts often contain multiple distinct performance obligations.

The Company estimates the transaction price of a contract 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.

In arrangements with multiple performance obligations, the estimated transaction price of each contract is allocated to each distinct performance obligation based on relative stand-alone selling price ("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 SSP is determined based on market conditions and other observable inputs.

When the Company sells third-party goods and services, it evaluates whether the Company is the principal, and reports revenue on a gross basis, or an agent, and reports revenue on a net basis. In this assessment, the Company considers if it obtains control of the specified goods or services before they are transferred to the customer, as well as other indicators such as the party primarily responsible for fulfillment, inventory risk, and discretion in establishing price.

Revenue is recorded net of taxes collected from customers which are subsequently remitted to the relevant government authority. The Company does not capitalize any cost associated with contract acquisition because it applies a practical expedient and expenses commissions when incurred as most direct contract acquisition costs relate to contracts that are recognized over a period of one year or less. Sales commissions are included in Sales and marketing expenses in the consolidated statements of operations. The as-invoiced practical expedient is applied when the amount

of consideration the Company has a right to invoice corresponds directly with the value to the customer of the entity's performance completed to date.

Nature of Products and Services

Platform segment:

The Company generates platform revenue from the sale of digital advertising and related services including the demand-side ad platform and content distribution services such as subscription and transaction revenue shares, media and entertainment promotional spending, the sale of Premium Subscriptions, and sale of branded channel buttons on remote controls.

The Company sells digital advertising to advertisers directly or through advertising agencies and to content publishers for their media and entertainment promotions via various campaign tools. Advertising arrangements include video and display advertising delivered through advertising impressions. Advertising arrangements include multiple performance obligations as they contain distinct advertising products or services. For such arrangements, the Company allocates revenue to each distinct performance obligation based on their relative SSP. The Company also generates revenue from customers using its ad platform. For such arrangements, it charges a platform fee, which is a percentage of a customer's advertising inventory spend during the month, along with data and any add-on features purchased through the platform. The Company recognizes revenue on either a gross or net basis for digital advertising based on its determination as to whether it is acting as the principal in the revenue generation process or as an agent. Where the Company is the principal, it controls the advertising inventory before it is transferred to its customers. This is further supported by the Company being primarily responsible to its customers for the fulfillment and having a level of discretion in establishing pricing. Advertising arrangements comprised of multiple performance obligations are recognized either at a point in time or over time depending on the nature of the distinct performance obligation.

The Company's content distribution revenue sharing arrangements include cash or non-cash consideration. The 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. Revenue is recognized on a net basis as the Company is deemed to be the agent between content publishers and end users. Revenue is recognized on a time elapsed basis, by day, as the services are delivered over the contractual distribution term. Non-cash consideration is usually in the form of advertising inventory, the fair value of which is determined based on relevant internal and third-party data.

The Company sells monthly subscriptions for premium content on The Roku Channel for varying fees for different content. Revenue from such Premium Subscription fees is recognized on a gross basis over the service period as the Company is deemed to be the principal in the relationship with the end user. The Company obtains control of the content before transferring to the end user and has latitude in establishing pricing. The Company pays fixed fees per subscriber or fixed percentage of revenue share to the providers of premium content on The Roku Channel based on the contractual arrangement and recognizes that in Cost of revenue, platform.

The Company sells branded channel buttons on remote controls of streaming devices that provide one-touch access to a publisher's content. The Company typically receives a fixed fee per button for each unit sold over a defined distribution period. Revenue is recognized on a time elapsed basis, by day, over the distribution term.

Devices segment:

The Company generates devices revenue from the sale of streaming players, audio products, smart home products and accessories that are sold through retailers and distributors, as well as directly to customers through the Company's website. Effective as of the fourth quarter of 2022, the Company renamed the segment from player to devices which now also includes revenue from licensing arrangements with service operators and licensed Roku TV partners.

The Company sells the majority of its devices in the U.S. through retailers and distributors as well as through the Company's website. Devices revenue primarily consists of hardware, embedded software, and unspecified upgrades and updates on a when and if-available basis. The hardware and embedded software are considered as one performance obligation and revenue is recognized at a point in time when the control transfers to the customer. Unspecified upgrades and updates are available to customers on a when-and-if available basis. The Company records the allocated value of the unspecified upgrades and updates as deferred revenue and recognizes it as devices revenue ratably on a time elapsed basis over the estimated economic life of the associated products.

The Company's devices revenue includes allowances for sales returns and sales incentives in the estimated transaction price. These estimates are based on historical experience and anticipated performance. Shipping charges billed to customers are included in devices revenue and the related shipping costs are included in Cost of revenue, devices.

The Company licenses the Roku OS, including updates and upgrades, to licensed Roku TV partners and service operators. The licensing revenue is recognized at a point in time, when the Company makes the intellectual property available and the control transfers to the customer. The revenue allocated to unspecified upgrades and updates is recognized on a time elapsed basis, by day, over the service period. Professional services revenue is recognized as services are provided or accepted. Hosting fees are recognized on a time elapsed basis, by day, over the service period.

Leases

The Company determines if an arrangement contains a lease at its inception. Operating leases are included in operating lease right-of-use ("ROU") assets, accrued liabilities, and operating lease liability in our consolidated balance sheets. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As the rate implicit in the lease is not readily determinable, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of future lease payments. The Company takes into consideration its credit rating and the length of the lease when calculating the incremental borrowing rate. The Company considers the options to extend or terminate the lease in determining the lease term, when it is reasonably certain to exercise one of the options.

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. The carrying amounts reported in the consolidated financial statements for cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values due to their short-term nature. The carrying amount of debt approximates fair value due to its variable interest rates.

Inventories

The Company's inventories consist primarily of finished goods and are stated at the lower of cost or net realizable value with cost determined on a first-in, first-out basis. Provisions are made if the cost of the inventories exceeds their net realizable 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 range from one to eleven years.

The Company capitalizes costs to develop its internal-use software. Costs that relate to the planning and post-implementation phases of development are expensed as incurred. Costs are capitalized when preliminary efforts are successfully completed, management has authorized and committed to funding the project, 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 year ended December 31, 2022, the Company did not capitalize any internal-use software costs. During the years ended December 31, 2021, and 2020, the Company capitalized internal-use software development costs of \$0.5 million and \$2.2 million, respectively. Capitalized costs are amortized using the straight-line method over the estimated useful life of the asset, which is generally two to three years, beginning when the asset is ready for its intended use. During the years ended December 31, 2022, 2021, and 2020, the Company amortized expenses of \$1.0 million, \$1.0 million, and \$0.5 million, respectively.

Deferred Revenue

The Company's deferred revenue reflects fees received in advance that will be recognized as revenue over time or as services are rendered. Deferred revenue balances consist of the amount of devices revenue allocated to unspecified upgrades and updates on a when-and-if available basis, and advance payments from advertisers, content publishers, and licensing or services fees received from service operators and TV brands, where performance obligations are not yet fulfilled. Deferred revenue expected to be realized within one year is classified as a current liability and the remaining is recorded as a non-current liability.

Advertising Expenses

Advertising expenses are recognized when incurred and are included in Sales and marketing expense in the consolidated statements of operations. The Company incurred advertising expenses of \$10.0 million, \$35.2 million, and \$7.1 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Stock-Based Compensation

The Company measures compensation expense for all stock-based awards, including restricted stock units and stock options granted to employees, based on the estimated fair value of the award on the date of grant. For restricted stock units, the grant date fair value is based on the closing market price of the Company's Class A common stock on the date of grant. The fair value of each stock option is estimated using the Black-Scholes option pricing model. The Company accounts for forfeitures as they occur. Stock-based compensation is recognized on a straight-line basis over the requisite vesting period.

The Black-Scholes option pricing model used to fair value stock options include the following assumptions:

- *Fair Value of Our Common Stock.* The Company uses the closing market price of its 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. The Company uses the simplified calculation of the expected term, which reflects weighted-average time to vest and the contractual life of the stock options granted, in absence of its own historical exercise data.
- *Volatility.* The expected volatility is derived from an average of the historical volatility of the Company's Class A common stock price and the stock price volatilities of several peer companies which are similar in size and operational and economic activities.
- *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 stock options.
- *Dividend Yield.* The expected dividend is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

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.

Recently Adopted Accounting Standards

On January 1, 2022, the Company adopted the guidance issued in Accounting Standards Update ("ASU") 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. ASU 2021-08 requires companies to apply Accounting Standards Codification, Revenue from Contracts with Customers (Topic 606) to recognize and measure contract assets and contract liabilities from contracts with customers acquired in a business combination. The adoption did not have a material impact on the Company's consolidated financial statements.

In December 2022, the FASB issued ASU 2022-06, *Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848*. This guidance defers the sunset date for applying the reference rate reform relief in ASC 848 to

December 31, 2024. The guidance is effective as of December 21, 2022 through December 31, 2024. The adoption did not have a material impact on the Company's consolidated financial statements.

3. REVENUE

The Company's disaggregated revenue is represented by the two reportable segments discussed in Note 18.

The contract balances include the following (in thousands):

	As of December 31,		
	2022	2021	2020
Accounts receivable, net	\$ 760,793	\$ 752,393	\$ 523,852
Contract assets (included in Prepaid expenses and other current	42,617	46,952	7,431
Deferred revenue, current portion	87,678	45,760	55,465
Deferred revenue, non-current portion	28,210	28,726	21,283
Total deferred revenue	\$ 115,888	\$ 74,486	\$ 76,748

Accounts receivable are recorded at the amount invoiced, net of an allowance for sales returns, sales incentives, and doubtful accounts. Payment terms can vary by customer and contract.

The timing of revenue recognition may differ from the timing of invoicing to customers. Contract assets are created when invoicing occurs subsequent to revenue recognition. Contract assets are transferred to accounts receivable when the right to invoice becomes unconditional. The Company's contract assets are current in nature and are included in Prepaid expenses and other current assets. Contract assets decreased by \$4.3 million during the year ended December 31, 2022 due to the timing of billing to customers and a slower growth rate in platform revenue. Contract assets increased by \$39.5 million during the year ended December 31, 2021 primarily due to an increase in the growth of platform revenue combined with the timing of billing which fell into a subsequent period.

Deferred revenue reflects consideration invoiced prior to the completion of performance obligations and revenue recognition. Deferred revenue increased by approximately \$41.4 million during the year ended December 31, 2022 primarily due to the billings in excess of revenue recognized and timing of fulfillment of performance obligations related to revenue arrangements. Deferred revenue decreased by approximately \$2.3 million during the year ended December 31, 2021 primarily due to the timing of fulfillment of performance obligations related to content arrangements offset by an increase in deferred revenue from advertising arrangements due to growth in the platform business and an increase in the deferral period of devices revenue for its unspecified upgrades.

Revenue recognized during the year ended December 31, 2022 from amounts included in the total deferred revenue as of December 31, 2021 was \$47.6 million. Revenue recognized during the year ended December 31, 2021 from amounts included in the total deferred revenue as of December 31, 2020 was \$56.2 million.

Revenue allocated to remaining performance obligations represents estimated contracted revenue that has not yet been recognized which includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods. Estimated contracted revenue for these remaining performance obligations was \$997.4 million as of December 31, 2022, of which the Company expects to recognize approximately 56% over the next 12 months and the remainder thereafter.

The Company reversed \$3.2 million and recognized \$28.6 million during the years ended December 31, 2022 and 2021, respectively, from performance obligations that were satisfied in previous periods due to the changes in the estimated transaction price of its revenue contracts.

The Company did not have any customer that individually accounted for more than 10% of its total net revenue as of December 31, 2022 and 2021. Customer C accounted for 12% of total net revenue during the year ended December 31, 2020.

4. BUSINESS COMBINATIONS

Nielsen's Advanced Video Advertising Business

On February 28, 2021, the Company entered into an Asset and Stock Purchase Agreement to purchase the Advanced Video Advertising (“AVA”) business from Nielsen Holdings PLC (“Nielsen”). The AVA business consists primarily of video automatic content recognition and dynamic ad insertion technologies. On April 15, 2021, the Company closed the transaction, acquiring from Nielsen the AVA business, consisting of certain assets and liabilities and all of the equity interests in a subsidiary associated with the AVA business (the “Acquisition”). In conjunction with the Acquisition, the Company and Nielsen entered into a strategic commercial arrangement under which the parties will provide certain advertising measurement solutions to each other. The Company acquired Nielsen’s AVA business to accelerate its launch of an end-to-end linear ad replacement solution and to further integrate Nielsen’s ad and content measurement products into the Company’s ad platform.

The total purchase consideration for Nielsen’s AVA business was \$53.4 million, which consisted of (i) \$38.5 million paid in cash and (ii) \$21.4 million of non-cash consideration related to obligations to deliver services to Nielsen, offset by (iii) \$6.5 million of services to be received from Nielsen. The obligations to deliver services to Nielsen were recorded at fair value using the incremental cash flow method. The services to be delivered to Nielsen are recognized within Other income (expense), net in the consolidated statements of operations over the six year service period. The services to be received from Nielsen represent contract terms that the Company entered into for future goods and services that were recorded at fair value using the incremental cash flow method. These services are recognized as Cost of revenue, platform in the consolidated statements of operations over the six year service period. The Company incurred \$3.9 million in acquisition-related expenses that were recorded in General and administrative expenses in the consolidated statements of operations during the year ended December 31, 2021.

The allocation of the purchase consideration to tangible and intangible assets acquired and liabilities assumed based on estimated fair values was as follows (in thousands):

	<u>Fair Values</u>
Assets acquired	
Cash and cash equivalents	\$ 3,057
Prepaid expenses and other current assets	85
Property and equipment, net	584
Intangible assets:	
Developed technology	11,000
IPR&D technology	7,500
Goodwill	36,790
Operating lease right-of-use assets	1,235
Other non-current assets	1,905
Total assets acquired	<u>62,156</u>
Liabilities assumed	
Accounts payable and accrued liabilities	(1,168)
Operating lease liabilities, non-current portion	(830)
Other long-term liabilities	(6,767)
Total liabilities assumed	<u>(8,765)</u>
Total purchase consideration	<u><u>\$ 53,391</u></u>

The excess of the total consideration over the tangible assets, intangible assets, and liabilities assumed was recorded as goodwill. Goodwill was primarily attributable to expected synergies in advertising offerings and cross-selling opportunities. The majority of the goodwill recorded was deductible for tax purposes.

The fair value of the developed technology was estimated using the relief-from-royalty method. The key valuation assumptions included the Company’s estimates of expected future earnings and royalty rate. The Company amortizes the fair value of the developed technology on a straight-line basis over its estimated useful life. The fair

value of the in-process research and development (“IPR&D”) technology was estimated using the multi-period-excess-earnings method. The key valuation assumptions included the Company’s estimates of expected future revenue and margin.

The valuation of the intangible assets acquired from Nielsen’s AVA business along with their estimated useful lives, were as follows (in thousands, except years):

	Estimated Fair Value	Estimated Weighted-Average Useful Lives (in years)
Developed technology	\$ 11,000	5.9
IPR&D technology	7,500	
Estimated fair value of acquired intangible assets	<u>\$ 18,500</u>	5.9

This Old House

On March 19, 2021, the Company acquired all outstanding shares of TOH Intermediate Holdings, LLC (“This Old House”), a home improvement media business, according to the terms and conditions of the Equity Purchase Agreement. The Company acquired the This Old House business because the Company believed the content aligned with The Roku Channel’s ad-supported growth strategy.

The total purchase consideration for This Old House was \$97.8 million, paid entirely in cash. The Company incurred \$2.4 million in acquisition-related expenses that were recorded in General and administrative expenses in the consolidated statements of operations during the year ended December 31, 2021.

The allocation of the purchase consideration to tangible and intangible assets acquired and liabilities assumed based on estimated fair values was as follows (in thousands):

	Fair Values
Assets acquired	
Cash and cash equivalents	\$ 7
Accounts receivable	5,830
Prepaid expenses and other current assets	7,310
Property and equipment, net	307
Intangible assets:	
Tradename	20,000
Customer relationships	700
Goodwill	46,671
Operating lease right-of-use assets	5,498
Other non-current assets	23,487
Total assets acquired	<u>109,810</u>
Liabilities assumed	
Accounts payable and accrued liabilities	(2,747)
Deferred revenue, current portion	(4,146)
Operating lease liabilities, non-current portion	(4,262)
Deferred revenue, non-current portion	(816)
Other long-term liabilities	(28)
Total liabilities assumed	<u>(11,999)</u>
Total purchase consideration	<u><u>\$ 97,811</u></u>

Other non-current assets included \$22.5 million of content assets acquired. The fair value of the content assets was estimated using the income approach. Amortization expense related to the content assets was recorded on an accelerated basis according to the pattern of monetization.

The excess of the total consideration over the tangible assets, identifiable intangible assets, and assumed liabilities was recorded as goodwill. Goodwill was primarily attributable to expected synergies in the advertising offerings as the Company expected to bring more free ad-supported content to the users. The goodwill recorded was deductible for tax purposes.

The fair value of the tradename was estimated using the relief-from-royalty method. The key valuation assumptions included the Company's estimates of expected future revenue and royalty rate. The Company amortizes the fair value of the tradename on a straight-line basis over its estimated useful life.

The valuation of the intangible assets acquired from This Old House along with their estimated useful lives, was as follows (in thousands, except years):

	Estimated Fair Value	Estimated Weighted- Average Useful Lives (in years)
Tradename	\$ 20,000	10.0
Customer relationships	700	4.0
Estimated fair value of acquired intangible assets	<u>\$ 20,700</u>	9.8

5. GOODWILL AND INTANGIBLE ASSETS

Goodwill

Goodwill represents the excess of purchase consideration in a business combination over the fair value of tangible and intangible assets acquired net of the liabilities assumed. All goodwill relates to the platform segment.

The following table reflects the changes in the carrying value of goodwill (in thousands):

	Carrying Value
Balance as of December 31, 2020	\$ 73,058
Additions	
This Old House acquisition	46,671
Nielsen AVA business acquisition	36,790
Other immaterial acquisition	5,000
Balance as of December 31, 2021	<u>\$ 161,519</u>
Balance as of December 31, 2022	<u>\$ 161,519</u>

Goodwill is evaluated for impairment annually. No impairment was recognized during the years ended December 31, 2022, 2021, and 2020.

Intangible Assets

The following tables summarize the Company's intangible assets for the periods presented (in thousands, except years):

	As of December 31, 2022			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Useful Lives (in years)
Developed technology	\$ 73,367	\$ (37,278)	\$ 36,089	5.9
Customer relationships	14,100	(10,920)	3,180	4.0
Tradename	20,400	(3,966)	16,434	9.8
Patents	4,076	(898)	3,178	14.0
Total Intangible assets	<u>\$ 111,943</u>	<u>\$ (53,062)</u>	<u>\$ 58,881</u>	6.7

	As of December 31, 2021			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Useful Lives (in years)
Developed technology	\$ 73,367	\$ (25,350)	\$ 48,017	5.9
Customer relationships	14,100	(7,395)	6,705	4.0
Tradename	20,400	(1,966)	18,434	9.8
Patents	4,076	(606)	3,470	14.0
Intangible assets subject to amortization	<u>\$ 111,943</u>	<u>\$ (35,317)</u>	<u>\$ 76,626</u>	6.7
IPR&D technology	7,500	—	7,500	
Total Intangible assets	<u>\$ 119,443</u>	<u>\$ (35,317)</u>	<u>\$ 84,126</u>	

In the fourth quarter of 2022, the Company recognized an impairment charge of \$7.5 million as part of its restructuring efforts related to the abandonment of future development of certain technology assets. See Note 15 for details.

The Company recorded expenses of \$17.7 million, \$17.3 million, and \$14.5 million for amortization of intangible assets during the years ended December 31, 2022, 2021, and 2020, respectively. During the years ended December 31, 2022, 2021, and 2020, the Company recorded amortization of developed technology in Cost of revenue, platform and Research and development expenses. The Company recorded amortization of customer relationships and tradename in Sales and marketing expenses, and recorded amortization of patents in General and administrative expenses in the consolidated statements of operations.

As of December 31, 2022, the estimated future amortization expense for intangible assets for the next five years and thereafter is as follows (in thousands):

Year Ending December 31,	
2023	\$ 17,066
2024	14,275
2025	12,571
2026	4,074
2027	2,737
Thereafter	8,158
Total	<u>\$ 58,881</u>

6. BALANCE SHEET COMPONENTS

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

	As of December 31,	
	2022	2021
Accounts receivable, gross	\$ 800,984	\$ 809,220
Less: Allowances		
Allowance for sales returns	7,417	6,015
Allowance for sales incentives	28,903	48,411
Allowance for doubtful accounts	3,498	2,158
Other allowances	373	243
Total allowances	40,191	56,827
Accounts Receivable, net	\$ 760,793	\$ 752,393

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

	As of December 31,	
	2022	2021
Computers and equipment	\$ 45,989	\$ 38,473
Leasehold improvements	353,245	182,229
Internal-use software	7,274	7,274
Office equipment and furniture	28,614	20,829
Property and equipment, gross	435,122	248,805
Accumulated depreciation and amortization	(100,091)	(71,238)
Property and Equipment, net	\$ 335,031	\$ 177,567

Depreciation and amortization expense, for property and equipment assets, for the years ended December 31, 2022, 2021, and 2020 was \$31.0 million, \$25.4 million, and \$21.7 million, respectively.

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

	As of December 31,	
	2022	2021
Payments due to content publishers	\$ 201,054	\$ 165,894
Accrued cost of revenue	105,347	142,014
Marketing, retail and merchandising costs	163,367	47,428
Operating lease liability, current	54,689	37,116
Content liability, current	88,717	70,462
Other accrued expenses	137,636	86,141
Total Accrued Liabilities	\$ 750,810	\$ 549,055

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

	As of December 31,	
	2022	2021
Platform, current	\$ 59,276	\$ 17,144
Devices, current	28,402	28,616
Total deferred revenue, current	87,678	45,760
Platform, non-current	969	1,066
Devices, non-current	27,241	27,660
Total deferred revenue, non-current	28,210	28,726
Total Deferred Revenue	\$ 115,888	\$ 74,486

Other Long-term Liabilities: Other Long-term liabilities consisted of the following (in thousands):

	As of December 31,	
	2022	2021
Content liability, non-current	\$ 39,587	\$ 51,211
Other long-term liabilities	30,324	31,274
Total Other long-term liabilities	\$ 69,911	\$ 82,485

7. CONTENT ASSETS

Content assets consisted of the following (in thousands):

	As of December 31,	
	2022	2021
Licensed content, net and advances	\$ 243,226	\$ 218,456
Produced content:		
Released, less amortization	42,605	20,030
Completed, not released	3,537	881
In production	42,904	3,512
Total produced content, net	89,046	24,423
Total content assets, net and advances	\$ 332,272	\$ 242,879
Current portion	\$ 39,506	\$ 19,166
Non-current portion	\$ 292,766	\$ 223,713

Amortization of content assets is included in Cost of revenue, platform in the consolidated statements of operations and is as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Licensed content	\$ 216,393	\$ 84,133	\$ 22,392
Produced content	17,962	11,437	—
Total amortization costs	\$ 234,355	\$ 95,570	\$ 22,392

The following table reflects the expected amortization expense of released produced and licensed content assets, net for the next three years (in thousands):

	Years Ended December 31,		
	2023	2024	2025
Licensed content	\$ 109,075	\$ 50,655	\$ 29,770
Produced content	16,185	8,403	8,035
Total expected amortization costs	\$ 125,260	\$ 59,058	\$ 37,805

8. STRATEGIC INVESTMENT

In June 2022, the Company agreed to provide financing of up to \$60.0 million in the aggregate to a counterparty with whom the Company has a commercial relationship, of which \$40.0 million was advanced in the form of convertible promissory notes (the “Strategic Investment”) and is recognized in Other non-current assets on the consolidated balance sheets. The Strategic Investment accrues interest at 5% per annum and has a maturity date of June 15, 2025, or is due upon a redemption event or in the event of a default.

The Strategic Investment contains certain redemption features that meet the definition of embedded derivatives and require bifurcation. The Company elected to apply the fair value option and account for the hybrid instrument containing the host contract and the embedded derivatives at fair value as a single instrument, with any subsequent changes in fair value included in Other income (expense), net in the consolidated statements of operations. See Note 9 for additional details on the fair value of the Strategic Investment.

9. FAIR VALUE DISCLOSURE

The Company’s financial assets measured at fair value on a recurring basis are as follows (in thousands):

	As of December 31, 2022			As of December 31, 2021		
	Fair Value	Level 1	Level 3	Fair Value	Level 1	Level 3
Assets:						
Cash and cash equivalents:						
Cash	\$ 1,353,547	\$ 1,353,547	\$ —	\$ 1,130,172	\$ 1,130,172	\$ —
Money market funds	608,409	608,409	—	1,015,871	1,015,871	—
Restricted cash, non-current	—	—	—	1,627	1,627	—
Strategic Investment	—	—	39,468	—	—	—
Total assets measured and recorded at fair value	\$ 1,961,956	\$ 1,961,956	\$ 39,468	\$ 2,147,670	\$ 2,147,670	\$ —

The following table reflects the changes in the fair value of the Company’s Level 3 financial assets (in thousands):

	Fair Value
Balance, December 31, 2021	\$ —
Purchase of Strategic Investment	40,000
Change in estimated fair value of Strategic Investment	(532)
Balance, December 31, 2022	\$ 39,468

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 minimizes the use of unobservable inputs in measuring fair value, and utilizes 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 including restricted cash, accounts receivable, prepaid expenses, accounts payable, and accrued liabilities.

The Company considers all highly liquid investments purchased with an original or remaining maturity of three months or less at the date of purchase to be cash equivalents. The Company measured money market funds of \$608.4 million and \$1,015.9 million as cash equivalents as of December 31, 2022 and 2021, respectively, using Level 1 inputs.

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 did not have any Level 2 instruments as of December 31, 2022 and 2021.

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.

As of December 31, 2022, the Company measured the Strategic Investment using Level 3 inputs. The fair value of the Strategic Investment on the date of purchase was determined to be equal to its principal amount. The Company recorded an unrealized loss of \$0.5 million in Other income (expense), net related to the adjustment to fair value of the Strategic Investment for the year ended December 31, 2022.

The Company did not have any Level 3 financial assets or liabilities as of December 31, 2021.

The Company classified the Strategic Investment as Level 3 due to the lack of relevant observable market data over fair value inputs. The fair value of the Strategic Investment was estimated using a scenario-based probability weighted discounted cash flow model. Significant assumptions include the discount rate, and the timing and probability weighting of the various redemption scenarios that impact the settlement of the Strategic Investment.

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

Non-financial assets such as goodwill, intangible assets, property and equipment, operating lease right-of-use assets, and content assets are evaluated for impairment and adjusted to fair value using Level 3 inputs, only when impairment is recognized.

10. LEASES

The Company has entered into operating leases primarily for office real estate. The leases have remaining terms ranging from 1 year to 11 years and may include options to extend or terminate the lease. The depreciable life of ROU assets is limited by the expected lease term.

The components of lease expense are as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 76,359	\$ 46,410	\$ 42,127
Variable lease cost	18,991	15,080	12,116
Total operating lease cost	<u>\$ 95,350</u>	<u>\$ 61,490</u>	<u>\$ 54,243</u>

Supplemental cash flow information related to leases is as follows (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease			
Operating cash outflows from operating leases	\$ 56,370	\$ 51,657	\$ 30,664
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	\$ 231,728	\$ 110,845	\$ 12,031

Supplemental balance sheet information related to leases is as follows (in thousands, except lease term and discount rate):

	As of December 31,	
	2022	2021
Operating lease right-of-use assets	\$ 521,695	\$ 345,660
Operating lease liability, current (included in Accrued liabilities)	54,689	37,116
Operating lease liability, non-current	584,651	394,724
Total operating lease liability	<u>\$ 639,340</u>	<u>\$ 431,840</u>
Weighted-average remaining term for operating leases (in years)	8.62	8.38
Weighted-average discount rate for operating leases	3.80 %	3.98 %

Future lease payments under operating leases as of December 31, 2022 are as follows (in thousands):

Year Ending December 31,	Operating
2023	\$ 73,341
2024	86,301
2025	93,927
2026	94,513
2027	92,772
Thereafter	342,432
Total future lease payments	<u>783,286</u>
Less: imputed interest	(119,527)
Less: expected tenant improvement allowance	(24,419)
Total	<u>\$ 639,340</u>

As of December 31, 2022, the Company's commitment relating to operating leases that have not yet commenced was \$36.2 million. These operating leases will commence starting in fiscal year 2023 with lease terms of approximately 4 years to 11 years.

11. DEBT

The Company's outstanding debt as of December 31, 2022 and 2021 is as follows (in thousands):

	As of December 31,			
	2022		2021	
	Amount	Effective Interest Rate	Amount	Effective Interest Rate
Term Loan A Facility	\$ 80,000	4.4 %	\$ 90,000	2.0 %
Less: Debt issuance costs	(15)		(132)	
Net carrying amount of debt	<u>\$ 79,985</u>		<u>\$ 89,868</u>	

The carrying amount of debt approximates fair value due to its variable interest rates. The interest expense for the years ended December 31, 2022 and 2021 relating to the Credit Agreement is \$3.6 million and \$2.2 million, respectively.

Senior Secured Term Loan A and Revolving Credit Facilities

On February 19, 2019, the Company entered into a Credit Agreement with Morgan Stanley Senior Funding, Inc. (as amended on May 3, 2019, the "Credit Agreement"), which provides for (i) a four-year revolving credit facility in the aggregate principal amount of up to \$100.0 million (the "Revolving Credit Facility"), (ii) a four-year delayed draw term loan A facility in the aggregate principal amount of up to \$100.0 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 the Company's EBITDA for the most recently completed four fiscal quarter period, plus (x) an additional amount at the Company's discretion, so long as, on a pro forma basis at the time of incurrence, the Company's 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 (together with the Revolving Credit Facility and the Term Loan A Facility, collectively, the "Credit Facility").

On November 18, 2019, the Company borrowed the Term Loan A facility in the aggregate principal amount of \$100.0 million. In March 2020, the Company borrowed the available balance of \$69.3 million from the Revolving Credit Facility. For both borrowings, the Company elected an interest rate equal to the adjusted one-month LIBOR rate plus an applicable margin of 1.75% based on the Company's secured leverage ratio. In May 2020, the Company repaid the outstanding balance on the Revolving Credit Facility.

Loans under the Term Loan A Facility amortize in equal quarterly installments beginning on March 31, 2020, 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 or \$1.25 million and (ii) thereafter, 2.50% of the drawn principal amount of the Term Loan Facility or \$2.5 million, with the remaining balance payable on the maturity date of the Term Loan A Facility in February 2023. The Revolving Credit Facility may be borrowed, repaid, and reborrowed until the fourth anniversary of the Closing Date in February 2023, at which time all outstanding balances of the Revolving Credit Facility are due to be repaid.

The Company had outstanding letters of credit against the Revolving Credit Facility of \$37.7 million and \$38.0 million as of December 31, 2022 and 2021, respectively.

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 certain circumstances would be 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 of at least 1.00 to 1.00, and customary events of default.

As of December 31, 2022, the Company was in compliance with all of the covenants of the Credit Agreement.

12. STOCKHOLDERS' EQUITY

Preferred Stock

The Company has 10 million shares of undesignated preferred stock authorized but not issued with rights and preferences determined by the Company's Board of Directors at the time of issuance of such shares. As of December 31, 2022 and 2021, there were no shares of preferred stock issued and outstanding.

Common Stock

The Company has two classes of authorized common stock, Class A common stock and 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.

At-the-Market Offering

On March 2, 2021, the Company entered into an Equity Distribution Agreement with Morgan Stanley & Co. LLC, Citigroup Global Markets Inc., and Evercore Group L.L.C., as its sales agents, pursuant to which the Company could offer and sell from time-to-time shares of its Class A common stock for aggregate gross proceeds of up to \$1,000.0 million. In March 2021, the Company sold approximately 2.6 million shares of Class A common stock at an average selling price of \$379.26 per share, for aggregate gross proceeds of \$1,000.0 million and incurred issuance costs of \$10.4 million.

Common Stock Reserved For Issuance

As of December 31, 2022, the Company's common stock reserved for issuance in the future is as follows (in thousands):

Common stock awards granted under equity incentive plans	14,384
Common stock awards available for issuance under the 2017 Employee Stock Purchase Plan *	5,089
Common stock awards available for issuance under the 2017 Equity Incentive Plan	23,954
Total reserved shares of common stock	<u>43,427</u>

* The Company has not issued any common stock pursuant to the 2017 Employee Stock Purchase Plan.

Equity Incentive Plans

The Company has two equity incentive plans, the 2008 Equity Incentive Plan (the "2008 Plan") and the 2017 Equity Incentive Plan (the "2017 Plan"). The 2017 Plan became effective September 2017 in connection with the Company's initial public offering ("IPO"). No additional equity grants have been made pursuant to the 2008 Plan subsequent to the IPO. The 2017 Plan provides for the grant of incentive stock options to the Company's 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 the Company's employees, directors and consultants.

Restricted stock units granted under the 2017 Plan are subject to continuous service. Stock options granted under the 2017 Plan generally are granted at a price per share equivalent to the fair market value on the date of grant. Recipients of option grants who possess more than 10% of the combined voting power of the Company are subject to certain limitations, and incentive stock options granted to such recipients are at a price no less than 110% of the fair market value at the date of grant.

Restricted Stock Units

Restricted stock unit activity for the year ended December 31, 2022 is as follows (in thousands, except per share data):

	Number of Shares	Weighted- Average Grant Date Fair Value Per Share
Balance, December 31, 2021	3,286	\$ 169.76
Awarded	8,808	104.09
Released	(2,429)	116.38
Forfeited	(1,088)	142.84
Balance, December 31, 2022 - Outstanding	<u>8,577</u>	<u>\$ 120.82</u>

The weighted-average grant date fair value of restricted stock units granted during the years ended December 31, 2022, 2021, and 2020 was \$916.8 million, \$342.6 million, and \$210.1 million, respectively.

The fair value of restricted stock units that vested during the years ended December 31, 2022, 2021, and 2020 was \$282.6 million, \$135.6 million, and \$83.7 million, respectively.

The unrecognized stock-based compensation expense related to restricted stock units awarded to employees as of December 31, 2022 was \$898.6 million, which the Company expects to recognize over a weighted-average period of approximately 2.84 years.

Stock Options

The following table summarizes the Company's stock option activities under the 2008 Plan and 2017 Plan (in thousands, except years and 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, 2021	6,174	\$ 51.87	5.8	—	
Granted	2,215	63.66	—	\$ 36.66	
Exercised	(2,461)	7.46	—	—	
Forfeited and expired	(121)	167.00	—	—	
Balance, December 31, 2022 - Outstanding	<u>5,807</u>	<u>\$ 72.79</u>	<u>7.1</u>	<u>—</u>	<u>\$ 51,630</u>
Balance, December 31, 2022- Exercisable	<u>2,831</u>	<u>\$ 39.06</u>	<u>5.0</u>	<u>—</u>	<u>\$ 51,630</u>

The weighted-average grant date fair value per share of options granted during the years ended December 31, 2022, 2021, and 2020 was \$36.66, \$139.76, and \$54.39, respectively.

The intrinsic value for stock options exercised in the years ended December 31, 2022, 2021, and 2020 was \$210.0 million, \$997.6 million, and \$470.8 million, respectively. Intrinsic value represents the difference between the fair values of the Company's common stock and the stock options' exercise price on the date of grant.

As of December 31, 2022, the Company had \$107.8 million of unrecognized stock-based compensation expense related to unvested stock options that is expected to be recognized over a weighted-average period of approximately 2.6 years.

Stock-based Compensation

The Company measures the cost of employee services received in exchange for an equity award based on the grant date fair value of the award. Stock options granted to employees generally vest over one to four years have a term of ten years. Restricted stock units generally vest over four years. No stock-based compensation was capitalized for the years ended December 31, 2022 and 2020. The amount of stock-based compensation capitalized as part of internal-use software for the year ended December 31, 2021 was not material.

The following table presents total stock-based compensation expense for the years ended December 31, 2022, 2021, and 2020 (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Cost of revenue, platform	\$ 1,229	\$ 827	\$ 847
Cost of revenue, device	2,440	2,035	1,407
Research and development	147,653	77,770	58,412
Sales and marketing	123,946	63,503	42,846
General and administrative	84,663	43,397	30,564
Total stock-based compensation	<u>\$ 359,931</u>	<u>\$ 187,532</u>	<u>\$ 134,076</u>

The fair value of stock options granted under the 2008 Plan and 2017 Plan is estimated on the grant date using the Black-Scholes option-valuation model. The assumptions used to value stock options granted during the years ended December 31, 2022, 2021, and 2020 are as follows:

	Years Ended December 31,		
	2022	2021	2020
Expected term (in years)	5.0 - 6.8	5.0 - 6.8	5.0 - 6.7
Risk-free interest rate	1.37 - 4.33%	0.36 - 1.20%	0.22 - 1.67%
Expected volatility	57 - 61%	38 - 39%	36 - 39%
Dividend rate	—	—	—

13. COMMITMENTS AND CONTINGENCIES

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 its products, the Company enters into agreements with manufacturers and suppliers to procure inventory based upon certain criteria and timing. Some of these commitments are non-cancelable. As of December 31, 2022, the Company had \$169.7 million of non-cancelable purchase commitments for inventory.

Content Commitments

The Company enters into contracts with content publishers to license and produce content for streaming. When a title becomes available, the Company records a content asset and liability on the consolidated balance sheets. Certain licensing agreements, such as film output deals, include the obligation to license rights for unknown future titles for which the ultimate quantity and/or fees are not determinable as of the reporting date. The Company does not include any estimated obligation for these future titles beyond the known minimum amount. The unknown obligations could be material.

As of December 31, 2022, the Company's total obligation for licensed and produced content is \$393.1 million, of which the Company recorded \$94.6 million in Current liabilities and \$39.6 million in Other long-term liabilities in the consolidated balance sheets. The remaining \$258.9 million is not yet recognized on the consolidated balance sheets as the content does not meet the criteria for asset recognition.

The expected timing of payments for these content obligations are as follows (in thousands):

Year Ending December 31,

2023	\$	230,756
2024		111,158
2025		35,394
2026		10,532
2027		1,838
Thereafter		3,429
Total content liabilities	\$	<u>393,107</u>

The Company also licenses content under arrangements where the payments are variable and based on the revenue earned by the Company. Since those amounts cannot be determined as of December 31, 2022, they are not included in the obligations above.

Letters of Credit

As of December 31, 2022 and 2021, the Company had irrevocable letters of credit outstanding in the amount of \$37.7 million and \$38.0 million, respectively, related to facilities leases. The letters of credit have various expiration dates through 2030.

Contingencies

The Company accrues for loss contingencies, including liabilities for intellectual property licensing claims, when it believes such losses are probable and reasonably estimable. These contingencies are reviewed at least quarterly and adjusted to reflect the impact of negotiations, estimated settlements, legal rulings, advice of legal counsel, and other information and events. The resolution of these contingencies and of other legal proceedings can be, however, inherently unpredictable and subject to significant uncertainties.

From time to time, the Company is subject to legal proceedings, claims, and investigations in the ordinary course of business, including claims relating to employee relations, business practices, and patent infringement. The Company is involved in litigation matters not listed herein. 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. During the year ended December 31, 2022 and 2020, the Company did not have any loss contingencies that were material. During the year ended December 31, 2021 the Company recorded expenses of \$4.8 million in Cost of revenue, device, \$1.8 million in Cost of revenue, platform, and \$3.4 million in General and administrative expenses for claims related to patent infringement.

Indemnification

In the ordinary course of business, the Company has entered into contractual arrangements which provide indemnification provisions of varying scope and terms to business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of the Company's breach of such agreements and out of intellectual property infringement claims made by third parties. The Company's obligations under these agreements may be limited in terms of time or amount, and in some instances, the Company may have recourse against third parties for certain payments. In addition, the Company has entered into indemnification agreements with its directors and certain of its officers that will require it, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers.

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 has not accrued any liabilities related to such obligations in the consolidated financial statements.

14. INCOME TAXES

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

	Years Ended December 31,		
	2022	2021	2020
United States	\$ (486,886)	\$ 240,560	\$ (21,107)
Foreign	(5,397)	(3,973)	2,655
Net income (loss) before income taxes	<u>\$ (492,283)</u>	<u>\$ 236,587</u>	<u>\$ (18,452)</u>

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

	Years Ended December 31,		
	2022	2021	2020
Current:			
Federal	\$ 694	\$ —	\$ (219)
State	2,444	589	620
Foreign	2,002	490	743
	<u>5,140</u>	<u>1,079</u>	<u>1,144</u>
Deferred:			
Federal	448	193	—
State	220	256	—
Foreign	(86)	(7,326)	(2,089)
	<u>582</u>	<u>(6,877)</u>	<u>(2,089)</u>
Total	<u>\$ 5,722</u>	<u>\$ (5,798)</u>	<u>\$ (945)</u>

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

	Years Ended December 31,		
	2022	2021	2020
U.S. federal income tax at statutory rate	21.0 %	21.0 %	21.0 %
U.S. state and local income taxes	(0.5)	0.2	(3.2)
Change in valuation allowance	(39.1)	140.0	(698.4)
Federal research and development tax credit	14.6	(30.7)	102.9
Stock-based compensation	4.0	(114.3)	577.8
Discrete tax benefit due to intellectual property transfer	—	(19.1)	—
Meals and entertainment	(0.1)	0.1	(1.6)
Foreign rate differential	0.2	0.1	—
Section 162(m) limitation	(0.5)	1.1	(7.2)
State apportionment change	0.1	—	4.4
Tax rate change	—	(0.7)	—
Provision to return true-up	(0.1)	(0.1)	9.4
Other	(0.8)	(0.1)	0.1
Effective tax rate	<u>(1.2)%</u>	<u>(2.5)%</u>	<u>5.2 %</u>

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

	As of December 31,	
	2022	2021
Deferred tax assets:		
Net operating loss carryforwards	\$ 517,787	\$ 563,173
Reserves and accruals	20,068	20,969
Research and development credits	230,586	166,940
Operating lease liabilities	153,145	107,228
Stock-based compensation	50,661	36,350
Depreciation and amortization	41,377	40,583
Section 174 capitalization	165,219	—
Other	286	—
Total deferred tax assets	<u>1,179,129</u>	<u>935,243</u>
Deferred tax liabilities:		
Operating lease right-of-use assets	(128,517)	(85,713)
Total deferred tax liabilities	<u>(128,517)</u>	<u>(85,713)</u>
Valuation allowance	(1,040,341)	(838,949)
Net deferred tax assets	<u>\$ 10,271</u>	<u>\$ 10,581</u>

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminated the ability to deduct research and development expenses for tax purposes in the period the expenses were incurred. As a result, the Company has recorded additional U.S. income tax expense of \$3.0 million for the year ended December 31, 2022.

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, 2022, management believes it is more likely than not that the U.S. and Netherlands deferred tax assets will not be fully realizable. Accordingly, the Company has provided a full valuation allowance against its U.S. and Netherlands deferred tax assets.

The Company's U.S. federal and state valuation allowance increased by \$199.2 million and \$261.8 million during the years ended December 31, 2022 and 2021, respectively.

The change in the valuation allowance, during the year ended December 31, 2022, is primarily attributable to an increase in deferred tax assets generated through capitalization of section 174 research and development expenses for U.S. federal and conforming state purposes. The change in the valuation allowance during the year ended December 31, 2021 is primarily attributable to an increase in domestic net operating loss carryforwards primarily due to stock-based compensation expense, and an increase of approximately \$46.2 million in deferred tax assets that are not realizable, related to the intellectual property transfer completed during 2021, giving rise to foreign amortizable assets.

For federal and state income tax reporting purposes, respective net operating loss carryforwards of \$1,959.1 million and \$1,677.7 million are available to reduce future taxable income, if any. These net operating loss carryforwards will begin to expire in 2033 for federal and certain state net operating losses have expired in 2022.

For Brazil, Denmark, Netherlands, and U.K. income tax reporting purposes, the net operating loss carryforwards of \$8.0 million, \$1.6 million, \$23.5 million, and \$26.2 million, respectively, are available to reduce future taxable income, if any, in those countries. Brazil, Denmark, and U.K. net operating losses can be carried forward indefinitely. Netherlands net operating losses can be carried back one year and carried forward indefinitely.

As of December 31, 2022, the Company has research and development tax credit carryforwards of \$188.7 million and \$134.7 million for federal and state income tax purposes, respectively. If not utilized, the federal and state carryforwards will begin to expire in 2028 and 2035, respectively.

The total amount of unrecognized tax benefits as of December 31, 2022 is \$88.0 million, of which \$71.3 million is composed of research and development credits and \$16.7 million is related to international activities.

A reconciliation of the beginning and ending balance of unrecognized tax benefits is as follows (in thousands):

	As of December 31,	
	2022	2021
Unrecognized tax benefits at beginning of year	\$ 66,150	\$ 29,175
Gross increase for tax positions of current year	22,888	36,198
Gross decrease due to statute expiration	(317)	(330)
Gross increase for tax positions of prior years	676	1,107
Gross decrease for tax positions of prior years	(1,185)	—
Decrease relating settlements with taxing authorities	(184)	—
Unrecognized tax benefits balance at end of year	<u>\$ 88,028</u>	<u>\$ 66,150</u>

As of December 31, 2022, \$5.3 million of the Company's gross unrecognized tax benefits, if recognized, would affect the effective tax rate and, \$82.7 million would result in an adjustment to deferred tax assets with corresponding adjustments to the valuation allowance. We do not expect our gross unrecognized tax benefits to change significantly within the next 12 months.

The Company recognizes interest and penalties related to unrecognized tax benefits as a component of its income tax expense. The Company recorded \$0.8 million and \$0.3 million of accrued interest and penalties related to uncertain tax positions as of December 31, 2022 and December 31, 2021, respectively.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. All tax years remain subject to examination by federal and state 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 will continue to indefinitely reinvest earnings from its foreign subsidiaries, which are not significant. While federal income tax expense has been recognized as a result of the Tax Cuts and Jobs Act of 2017, 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.

15. RESTRUCTURING CHARGES

In November 2022, the Company approved a plan to reduce its operating expense growth rate due to economic conditions. The Company eliminated employee positions in the United States and internationally, and also abandoned future development for certain technology assets. Accordingly, the Company recorded employee termination expenses consisting primarily of severance payments, notice pay (where applicable), employee benefits contributions, payroll taxes and related costs, and an impairment charge related to the abandoned technology assets.

The restructuring charges are recorded as follows (in thousands):

	Year Ended December 31, 2022		
	Employee Terminations	Impairment Charge	Total
Research and development	\$ 12,092	\$ 7,500	\$ 19,592
Sales and marketing	10,904	—	10,904
General and administrative	7,644	—	7,644
Total restructuring charges	<u>\$ 30,640</u>	<u>\$ 7,500</u>	<u>\$ 38,140</u>

A reconciliation of the beginning and ending balance of employee termination restructuring charges, which are included in Accrued liabilities in the consolidated balance sheets, is as follows (in thousands):

	<u>Employee Terminations</u>
Balance as of December 31, 2021	\$ —
Employee termination restructuring charges incurred	30,640
Cash payments	(8,547)
Balance as of December 31, 2022	<u>\$ 22,093</u>

The Company expects the plan to be substantially complete by the end of the first quarter in fiscal 2023.

16. 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, 2022, 2021, and 2020.

The Company has a defined contribution plan in the U.K. for its U.K.-based employees. The Company contributed \$2.3 million, \$1.3 million, and \$0.7 million to the plan for the years ended December 31, 2022, 2021, and 2020, respectively.

17. NET INCOME (LOSS) PER SHARE

The Company’s basic net income (loss) per share is calculated by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding for the period. The Company uses the two-class method to calculate net income (loss) per share. Except with respect to certain voting, conversion, and transfer rights and as otherwise expressly provided in the Company’s amended and restated certificate of incorporation or required by applicable law, shares of the Company’s Class A common stock and Class B common stock have the same rights and privileges and rank equally, share ratably, and are identical in all respects as to all matters. Accordingly, basic and diluted net income (loss) per share are the same for both classes.

For purposes of the calculation of diluted net income (loss) per share, options to purchase common stock and restricted stock units are considered common stock equivalents. Dilutive shares of common stock are determined by applying the treasury stock method. The dilutive shares are excluded from the calculation of diluted net loss per share in the period of net loss, as their effect is antidilutive.

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

	Years Ended December 31,		
	2022	2021	2020
Numerator:			
Net income (loss)	\$ (498,005)	\$ 242,385	\$ (17,507)
Denominator:			
Basic net income (loss) per share:			
Weighted-average common shares outstanding — basic	137,668	132,710	123,978
Net income (loss) per share — basic	\$ (3.62)	\$ 1.83	\$ (0.14)
Diluted net income (loss) per share:			
Weighted-average common shares outstanding — basic	137,668	132,710	123,978
Effect of potentially dilutive securities:			
Restricted stock units	—	2,744	—
Stock options	—	6,214	—
Weighted-average common shares outstanding — diluted	137,668	141,668	123,978
Net income (loss) per share — diluted	\$ (3.62)	\$ 1.71	\$ (0.14)

Common stock equivalents excluded from the calculation of diluted net income (loss) per share because of their anti-dilutive effect were 14.4 million, 1.1 million and 13.1 million units of equity awards to purchase common stock granted under our equity plans for the years ended December 31, 2022, 2021, and 2020, respectively.

18. 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 CODM for purposes of allocating resources and evaluating financial performance. 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. 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 does not allocate property and equipment or any other assets or capital expenditures to reportable segments.

Effective as of the fourth quarter of fiscal 2022, the Company reorganized reportable segments to better align with management's reporting of information reviewed by the CODM for each segment. The Company's segment and related financial information has been recast to reflect the following changes; the Company renamed the player segment to the devices segment which now includes licensing arrangements with service operators and licensed Roku TV partners in addition to sales of streaming players, audio products and smart home products. All financial information, current and historical, has been recast based on the reorganized segments.

Updated descriptions of the Company's two reportable segments are as follows:

Platform

The platform segment generates revenue from the sale of digital advertising and related services including the demand-side platform and content distribution services such as subscription and transaction revenue shares, media and

entertainment promotional spending, the sale of Premium Subscriptions, and the sale of branded channel buttons on remote controls.

Devices

The devices segment generates revenue from the sale of streaming players, audio products, smart home products and accessories that are sold through retailers and distributors, as well as directly to customers through the Company's website. In addition, revenue from licensing arrangements with service operators and licensed Roku TV partners is now included in the devices segment.

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

	Years Ended December 31,		
	2022	2021	2020
<i>Platform segment revenue</i>			
Customer H	*	10 %	14 %
<i>Devices segment revenue</i>			
Customer A	*	*	10 %
Customer B	21 %	22 %	17 %
Customer C	38 %	35 %	39 %

* Less than 10%

Revenue in international markets was less than 10% in each of the periods presented.

Long-lived assets, net

The following table presents long-lived assets, net, which consist primarily of property and equipment and operating lease right-of-use assets, by geographic area (in thousands):

	As of December 31,	
	2022	2021
United States	\$ 686,902	\$ 442,012
United Kingdom	127,538	59,168
Other countries	42,286	22,047
Total	<u>\$ 856,726</u>	<u>\$ 523,227</u>

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. 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, 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, 2022 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, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 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, 2022, 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, 2022, 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, 2022, of the Company and our report dated February 16, 2023, expressed an unqualified opinion on those financial statements.

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

February 16, 2023

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to the information contained in the sections “Voting and Meeting Information,” “Board of Directors and Corporate Governance,” “Executive Officer Biographies,” and “Other Matters” in our definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of our year ended December 31, 2022 (our “Proxy Statement”).

Item 11. Executive Compensation

The information required by this item is incorporated by reference to the information contained in the sections “Compensation Discussion and Analysis” and “Executive Compensation” in our Proxy Statement.

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

The information required under Item 403 of Regulation S-K by this item is incorporated by reference to the information contained in the section “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement.

Equity Compensation Plan Information

The following table summarizes information about our equity compensation plans as of December 31, 2022.

Plan Category	Number of securities to be issued upon exercise of outstanding options and awards	Weighted-average exercise price of outstanding options (1)	Number of securities remaining available for future issuances under equity compensation plans
	(a)	(b)	(c)
	(in thousands, except per share amount)		
Equity compensation plans approved by security holders (2)	14,384	\$ 72.79	29,043
Equity compensation plans not approved by security holders	—	—	—
Total	14,384	\$ 72.79	29,043

(1) Restricted stock units have been excluded for purposes of computing weighted-average exercise prices in column (b) as they do not have an exercise price.

(2) The number of securities remaining available for future issuance in column (c) includes 23,954 shares (in thousands) of Class A common stock available for issuance under our 2017 Equity Incentive Plan (the “2017 Plan”) and 5,089 shares (in thousands) of Class A common stock available for issuance under our 2017 Employee Stock Purchase Plan. The number of shares authorized for issuance under the 2017 Plan is subject to an annual increase.

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

The information required by this item is incorporated by reference to the information contained in the sections “Certain Relationships and Related Transactions” and “Director Independence” in our Proxy Statement.

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to the information contained in the section “Ratification of Selection of Independent Registered Public Accounting Firm” in our Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

See Index to Financial Statements in Item 8 of this Annual 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>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</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	Reference is made to Exhibit 3.1					
4.2	Form of Class A Common Stock Certificate	S-1/A	333-220318	4.1	9/18/2017	
4.3	Description of Securities	10-K	001-38211	4.3	3/2/2020	
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 Consolidated Option Agreement and Option Grant Notice under 2017 Equity Incentive Plan	10-K	001-38211	10.4	2/18/2022	
10.5 +	Forms of Consolidated Restricted Stock Unit Grant Notice and Award Agreement under 2017 Equity Incentive Plan	10-K	001-38211	10.5	2/18/2022	
10.6 +	Executive Supplemental Stock Option Program Enrollment Form	8-K	001-38211	10.1	10/1/2021	
10.7 +	Roku, Inc. 2017 Employee Stock Purchase Plan	S-1/A	333-220318	10.8	9/18/2017	
10.8 +	Form of Indemnification Agreement, by and between Roku, Inc. and each of its directors and executive officers	S-1/A	333-220318	10.9	9/18/2017	
10.9 +	Employment Terms Agreement, by and between Roku, Inc. and Stephen Kay, dated November 15, 2013	S-1	333-220318	10.9	9/1/2017	
10.10 +	Employment Terms Agreement, by and between Roku, Inc. and Steve Loudon, dated June 11, 2015	S-1	333-220318	10.11	9/1/2017	
10.11 +	Employment Terms Agreement, by and between Roku, Inc. and Mustafa Ozgen, dated January 17, 2019	10-K	001-38211	10.18	3/2/2020	
10.12 +	Offer Letter, by and between Roku, Inc. and Charles Collier, dated September 16, 2022					X
10.13 +	Roku, Inc. Amended and Restated Severance Benefit Plan	8-K	001-38211	10.1	9/14/2022	
10.14	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	
10.15	First Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Phase 1, LLC dated November 12, 2018 (1155 Coleman Ave)	10-K	001-38211	10.30	3/1/2019	
10.16	Second Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Phase 1, LLC dated April 30, 2019 (1155 Coleman Ave)	10-Q	001-38211	10.2	8/9/2019	
10.17	Assignment and Assumption of Lease, Landlord's Consent and First Amendment of Lease, dated as of April 30, 2019, by and among Roku, Inc., 8x8, Inc. and CAP Phase I, LLC	10-Q	001-38211	10.1	8/9/2019	
10.18	Third Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Phase 1, LLC dated September 29, 2020 (1155 Coleman Ave)	10-Q	001-38211	10.1	4/29/2022	

10.19	Fourth Amendment to Coleman Highline Office Lease by and between Roku, Inc. and BCORE Coleman Owner LLC dated April 8, 2022 (1155 Coleman Ave)	10-Q	001-38211	10.3	4/29/2022	
10.20	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	
10.21	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)	10-K	001-38211	10.31	3/1/2019	
10.22	Second Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Oz 34, LLC dated April 30, 2019 (1173/1167/1161 Coleman Ave)	10-Q	001-38211	10.3	8/9/2019	
10.23	Third Amendment to Coleman Highline Office Lease by and between Roku, Inc. and Cap Oz 34, LLC dated June 4, 2020 (1173/1167/1161 Coleman Ave)	10-Q	001-38211	10.2	4/29/2022	
10.24	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	10-K	001-38211	10.32	3/1/2019	
10.25	Incremental Assumption and Amendment No. 1 to Credit Agreement, dated as of May 3, 2019, by and among Roku, Inc., Morgan Stanley Senior Funding, Inc., as administrative agent and issuing bank, and the other issuing banks and lenders party thereto from time to time	10-Q	001-38211	10.4	8/9/2019	
21.1	List of Significant Subsidiaries of Roku, Inc.					X
23.1	Consent of Independent Registered Public Accounting Firm					X
24.1	Power of Attorney (included in the signature page of this Annual Report on Form 10-K)					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	Inline XBRL Instance Document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

* These exhibits are furnished with this Annual Report 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.

Item 16. Form 10-K Summary

None.

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 16th day of February 2023.

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)

By: /s/ Matthew Banks
Matthew Banks
Vice President, Corporate Controller and Chief
Accounting Officer
(Principal Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Anthony Wood and Steve Louden, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ ANTHONY WOOD</u> Anthony Wood	President, Chief Executive Officer and Chairman (Principal Executive Officer)	February 16, 2023
<u>/s/ STEVE LOUDEN</u> Steve Louden	Chief Financial Officer (Principal Financial Officer)	February 16, 2023
<u>/s/ MATTHEW BANKS</u> Matthew Banks	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 16, 2023
<u>/s/ RAVI AHUJA</u> Ravi Ahuja	Director	February 16, 2023
<u>/s/ MAI FYFIELD</u> Mai Fyfield	Director	February 16, 2023
<u>/s/ JEFFREY HASTINGS</u> Jeffrey Hastings	Director	February 16, 2023
<u>/s/ LAURIE SIMON HODRICK</u> Laurie Simon Hodrick	Director	February 16, 2023
<u>/s/ NEIL HUNT</u> Neil Hunt	Director	February 16, 2023
<u>/s/ GINA LUNA</u> Gina Luna	Director	February 16, 2023
<u>/s/ RAY ROTHROCK</u> Ray Rothrock	Director	February 16, 2023

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