



Glu Mobile Inc.

**Combined Proxy Statement & Annual Report
for the 2020 Annual Meeting of Stockholders**

glu

April 28, 2020

Dear Stockholders,

2019 was an educational year for Glu and our stockholders. After two years of high growth, we endured a few challenges, some self-created, some exogenous, that resulted in less than expected growth. Our results were still solid with a 10% improvement in bookings compared to 2018. We also delivered record adjusted EBITDA as well as record GAAP profitability, a major milestone for the company. Despite these accomplishments, we felt we could have done better. As a result, we have made some key changes to position us for more significant growth in the future. This includes a reorganization of our Revenue Team, a new approach to giving guidance on new title launches, and a series of process improvements across the Studio and Central infrastructure. Although there is a lot of uncertainty in the current state of the world, we believe these actions, combined with our solid foundation and proven Growth Games, are already strengthening our position in 2020 and beyond.

Our Growth Games, *Design Home*, the *Tap Sports Baseball* franchise and *Covet Fashion*, all had double-digit year-over-year bookings growth in 2019 and collectively ended the year representing 79% of our bookings. In addition, we also added *Diner Dash Adventures* to our portfolio of live titles. As discussed on our earnings calls, these Growth Games are the focus for Glu – games that grow bookings year-over-year. They provide predictable, repeatable revenue and margin contribution, and allow us to invest in expanding our portfolio with the addition of new Growth Games that stack on the existing titles creating the potential for a strong, aggregated growth curve for the company.

Design Home, the number one home decorating game where you get to live the life of an interior designer, grew annual bookings by 12% to \$176.3 million. In 2019 we introduced ‘My Home’, a meta game system that expands creativity for our players, offering fun new in-game features. As successful as *Design Home* has been, we expect the franchise to continue to grow. We intend to build infrastructure to bring the game to other platforms such as web browser, and are looking at e-commerce opportunities as well as expanding our growth in Europe. We also have exciting features planned to continue to strengthen engagement and expand monetization.

Covet Fashion delivered \$66.1 million in bookings for 2019, which was up from \$53.4 million in 2018. The team continues to deepen the creative experience through new features such as Prop Shop, as well as expand the brand through real world events such as Covetcon and Covet Socials. This title is now in its seventh year and going stronger than ever, with successive new records in the third and fourth quarters of 2019. We are very optimistic about the future for this amazing franchise and look forward to further additions to expand the social connection between our players.

Finally, our *Tap Sports Baseball* franchise also had its best year ever delivering \$90.9 million in total bookings in 2019, up 21% from 2018. The depth of live operations and events, combined with a highly tuned elder game, has driven this game to the top of the sports genre with a highly dedicated and loyal player base of enthusiastic supporters. The 2020 version includes many new game features as well as a significant expansion of territories where the game is available.

2019 also saw the addition of *Diner Dash Adventures* to our growing list of live games. The latest in the *Dash* franchise, this hybrid game of a cooking time-management core loop and a decoration elder game has created what we believe is the best game in the series. The team is currently creating more systems and features to deliver additional fun and compelling events to our players on a daily basis. We very much look forward to a long life for *Diner Dash Adventures* and believe it can become another Growth Game for Glu.

Glu’s core strategy has been to create and operate Growth Games that delight our players. Now that we have built the internal infrastructure, culture and environment needed for this, we are able to accelerate our strategy by acquiring games and teams as well. In June 2019, we added a new studio in Orlando, Florida that is working on another title for our Sports & Outdoors brand, this time a fishing game. With *Tap Sports Baseball* already established and *Deer Hunter World* on the way, this will give us a strong foundation in building out this umbrella brand and creating multiple sports and outdoor experiences, each with fun and engaging core mechanics and deep elder games for long term enjoyment. We are also building our *Crowdstar* brand in the lifestyle space based on the success of *Covet Fashion* and *Design Home*.

We believe both brands will ensure greater attention to quality of the experiences, along with significant value in the marketplace for Glu and our stockholders.

We are focused on Growth Games because we believe that they can provide predictable, repeatable and growing revenue streams that allow us to better plan our roadmap as well as meet the needs of our business. Having this solid foundation puts us in a strong position with the ability to both build new games and acquire new titles and studios.

2019 was a year of learning, cementing our foundation and expanding our strategy as we start to focus on acquisitions of new studios, games and talent to add to the strong base we already have in place. Looking to 2020, we recently globally launched *Disney Sorcerer's Arena*, and intend to launch additional titles in the second half of the year, including *Deer Hunter World*. We believe that each title we launch can become a Growth Game and that we can create even greater growth for our existing Growth Games and deeper engagement with our players in the years ahead. We very much appreciate the support and the trust that our stockholders have placed in the management team as we continue our efforts to be one of the most successful mobile game makers in the world.

Sincerely yours,

A handwritten signature in black ink, appearing to read "N. Earl", with a stylized flourish at the end.

Nick Earl
President and Chief Executive Officer



These proxy materials contain forward-looking statements, including those statements in this Letter to Stockholders, that are not historical or are described on the page facing the inside back cover of these proxy materials. Forward-looking statements are subject to material risks and uncertainties that could cause actual results to differ materially, including potential impacts of the COVID-19 pandemic. Investors should consider important risk factors, which include those listed on the page facing the inside back cover of these proxy materials and those detailed under the caption "Risk Factors" beginning on page 16 of our 2019 Annual Report on Form 10-K included with these proxy materials and the risk factors described in our other SEC filings.

GLU MOBILE INC.

875 Howard Street, Suite 100

San Francisco, California 94103

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

NOTICE IS HEREBY GIVEN that an Annual Meeting of Stockholders of Glu Mobile Inc., a Delaware corporation (“Glu,” “we,” “our” and similar terms), will be held on Thursday, June 18, 2020, at 10:00 a.m. Pacific Time, at 875 Howard Street, Suite 100, San Francisco, California (the “Annual Meeting”). We intend to hold our annual meeting in person. However, we are sensitive to the public health and travel concerns our stockholders may have and recommendations that public health officials may issue in light of the evolving coronavirus (COVID-19) situation. As a result, we may impose additional procedures or limitations on meeting attendees (beyond those described herein) or may decide to hold the stockholder meeting in a different location or solely by means of remote communication (i.e., a virtual-only stockholder meeting). We plan to announce any such updates through a press release and on our proxy website <http://www.proxyvote.com>, and we encourage you to check this website prior to the meeting if you plan to attend. It is important that you retain a copy of the control number found on the proxy card, voting instruction form or Notice of Internet Availability of Proxy Materials, as such number will be required in order for stockholders to gain access to any meeting held solely by means of remote communication. At the Annual Meeting, our stockholders will be asked to consider and vote upon:

1. The election of four Class I directors to Glu’s Board of Directors (the “Board”), each to serve until Glu’s annual meeting of stockholders to be held in 2023 and until his or her successor is elected and qualified, or until his or her death, resignation or removal.
2. Approval of the amendment and restatement of our 2007 Equity Incentive Plan to increase the aggregate number of shares of common stock authorized for issuance under the plan by 7,000,000 shares and make certain other changes as described in more detail in the proxy statement.
3. An advisory vote to approve the compensation paid to Glu’s named executive officers.
4. The ratification of the appointment of PricewaterhouseCoopers LLP as Glu’s independent registered public accounting firm for the year ending December 31, 2020.
5. The transaction of such other business as may properly come before the Annual Meeting or before any adjournment(s) or postponement(s) thereof.

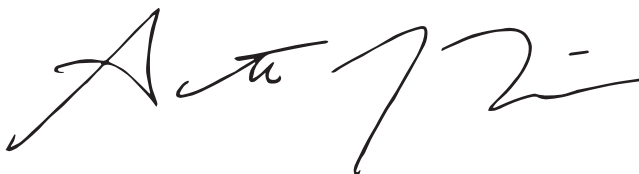
Proposals 1 through 4 are more fully described in the attached proxy statement. We have not received notice of other matters that may be properly brought before the Annual Meeting.

Only stockholders who owned our common stock at the close of business on April 20, 2020 may vote at the Annual Meeting, or at any adjournment or postponement of the meeting.

This year, we are again using the Internet as our primary means of furnishing proxy materials to stockholders. Consequently, most stockholders will not receive paper copies of our proxy materials. We will instead send these stockholders a Notice of Internet Availability of Proxy Materials with instructions for accessing the proxy materials and voting via the Internet. The Notice also provides information on how stockholders can obtain paper copies of our proxy materials if they so choose.

Your vote is important. Whether or not you plan to attend the Annual Meeting, please cast your vote, as instructed in the Notice of Internet Availability of Proxy Materials, over the Internet or by telephone, as promptly as possible. You may also request a paper proxy card to submit your vote by mail, if you prefer. **We encourage you to vote via the Internet.** We believe it is convenient for our stockholders, while significantly lowering the cost of our Annual Meeting and conserving natural resources.

By Order of the Board,

A handwritten signature in black ink, appearing to read 'Scott J. Leichtner', written in a cursive style.

Scott J. Leichtner
Vice President, General Counsel and Corporate Secretary

San Francisco, California

April 28, 2020

IMPORTANT NOTICE REGARDING INTERNET AVAILABILITY OF PROXY MATERIALS:

Glu's combined Proxy Statement for the 2020 Annual Meeting of Stockholders and the Annual Report to Stockholders for the year ended December 31, 2019 are available online at www.proxyvote.com. You will need your control number found on your Notice of Internet Availability to access these materials.

GLU MOBILE INC.

PROXY STATEMENT FOR THE 2020 ANNUAL MEETING OF STOCKHOLDERS

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The information contained in the Compensation Committee Report and the Audit Committee Report of this proxy statement shall not be deemed to be “soliciting material,” to be “filed” with the Securities and Exchange Commission (“SEC”), or to be subject to Regulation 14A or Regulation 14C (other than as provided in Item 407 of Regulation S-K) or to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and shall not be deemed to be incorporated by reference in future filings with the SEC except to the extent that we specifically incorporate it by reference into a document filed under the Securities Act of 1933, as amended, or the Exchange Act.

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GLU MOBILE INC.
875 Howard Street, Suite 100
San Francisco, California 94103
PROXY STATEMENT FOR THE
2020 ANNUAL MEETING OF STOCKHOLDERS

INFORMATION ABOUT THE MEETING, MEETING MATERIALS, VOTING AND PROXIES

Date, Time and Place of Meeting

The Board of Directors (the “Board”) of Glu Mobile Inc., a Delaware corporation (“Glu,” “we,” “our” and similar terms), is asking for your proxy for use at the 2020 Annual Meeting of Stockholders (the “Annual Meeting”) and at any adjournments or postponements of the meeting. We are holding the meeting on Thursday, June 18, 2020, at 10:00 a.m. Pacific Time, at our principal executive offices at 875 Howard Street, Suite 100, San Francisco, California. We intend to hold our annual meeting in person. However, we are sensitive to the public health and travel concerns our stockholders may have and recommendations that public health officials may issue in light of the evolving coronavirus (COVID-19) situation. As a result, we may impose additional procedures or limitations on meeting attendees (beyond those described herein) or may decide to hold the stockholder meeting in a different location or solely by means of remote communication (i.e., a virtual-only stockholder meeting). We plan to announce any such updates through a press release and on our proxy website (<http://www.proxyvote.com>). It is important that you retain a copy of the control number found on the proxy card, voting instruction form or Notice of Internet Availability of Proxy Materials, as such number will be required in order for stockholders to gain access to any meeting held solely by means of remote communication. We encourage you to check this website prior to the meeting if you plan to attend. We first released this proxy statement to our stockholders on or about April 28, 2020.

Internet Availability of Proxy Materials

We are pleased to again furnish proxy materials to our stockholders on the Internet, rather than mailing printed copies to each stockholder. If you received a Notice of Internet Availability of Proxy Materials (“Notice of Internet Availability”) by mail, you will not receive a printed copy of the proxy materials unless you request one. Instead, the Notice of Internet Availability provides instructions for accessing and reviewing the proxy materials and casting your vote on the Internet. If you received a Notice of Internet Availability by mail and would like to receive a printed copy of our proxy materials, please follow the instructions included in the Notice of Internet Availability. We encourage stockholders to take advantage of the electronic availability of the proxy materials to help reduce the expense and environmental impact of the Annual Meeting. We anticipate that the Notice of Internet Availability will be mailed to stockholders on or about April 28, 2020.

Record Date; Outstanding Shares; Quorum

Only holders of record of our common stock at the close of business on April 20, 2020 (the “Record Date”) will be entitled to notice of and to vote at the Annual Meeting. As of the close of business on the Record Date, there were 151,592,087 shares of our common stock outstanding and entitled to vote, held of record by approximately 48 stockholders and held beneficially by thousands of additional stockholders.

Pursuant to our Amended and Restated Bylaws (our “Bylaws”), a majority of the outstanding shares of common stock, present in person or by proxy, will constitute a quorum at the Annual Meeting. We must have a quorum to transact business. Each stockholder is entitled to one vote for each share of common stock held as of the Record Date. For ten days before the Annual Meeting, a complete list of stockholders entitled to vote at the Annual Meeting will be available upon request by any stockholder for any purpose germane to the meeting. Requests should be sent to: Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103, Attn: Corporate Secretary. If the meeting is held by means of remote communication, then the stockholder list will also be available during such virtual meeting.

Voting Via the Internet, by Telephone or By Mail

Holders of shares of our common stock whose shares are registered in their own name with our transfer agent, American Stock Transfer and Trust Company, are record holders. As an alternative to voting in person at the Annual Meeting, record holders may vote via the Internet, by telephone or, for those stockholders who receive a paper proxy card in the mail, by mailing a completed proxy card.

For those record holders who receive a paper proxy card, instructions for voting via the Internet, telephone or by mail are set forth on the proxy card. Stockholders who elect to vote by mail should sign and mail the proxy card in the addressed, postage paid envelope that was enclosed with the proxy materials, and their shares will be voted at the Annual Meeting in the manner they direct. All properly executed, returned and unrevoked proxies will be voted in accordance with the instructions indicated on the proxy card.

For those stockholders who receive a Notice of Internet Availability, the notice provides information on how to access the proxy and contains instructions on how to vote via the Internet or by telephone. If you received a Notice of Internet Availability, you can request a printed copy of your proxy materials by following the instructions contained in the notice. Stockholders who have elected to receive the 2020 Proxy Statement and Annual Report to Stockholders for the year ending December 31, 2019 electronically will receive an email on or about April 28, 2020 with information on how to access stockholder information and instructions for voting.

In light of the evolving COVID-19 situation, we strongly recommend that you vote your shares in advance of the meeting as instructed above, even if you plan to attend the meeting.

Signed but unmarked proxies will be voted FOR each director nominee listed on the proxy card, FOR the approval of the amendment and restatement of our 2007 Equity Incentive Plan, FOR the compensation of our Named Executive Officers (defined in “Compensation Discussion and Analysis” below), and FOR the ratification of our independent registered public accounting firm for the year ending December 31, 2020. The Board does not know of, and does not intend to bring, any business before the Annual Meeting other than that referred to in this proxy statement and specified in the Notice of Annual Meeting. As to any other business that may properly come before the Annual Meeting, including any motion made for adjournment of the Annual Meeting (including for purposes of soliciting additional votes), signing and returning the proxy card will confer discretionary authority on the proxies (Nick Earl and Eric R. Ludwig, who have been designated by the Board) to vote all shares covered by the proxy card in their discretion.

Revoking a Proxy

Any stockholder who has given a proxy may revoke it at any time before it is exercised at the Annual Meeting by (1) filing a written notice of revocation with, or delivering a duly executed proxy bearing a later date to, our Corporate Secretary at 875 Howard Street, Suite 100, San Francisco, California 94103 or (2) attending the Annual Meeting and voting in person (although attending the Annual Meeting will not, by itself, revoke a proxy).

Votes Required

Director elections (Proposal No. 1) will be determined by a plurality of shares of common stock present in person or represented by proxy at the Annual Meeting and entitled to vote on such proposal. Approval of each of the proposals to approve the amendment and restatement of our 2007 Equity Incentive Plan (Proposal No. 2), the advisory vote on the compensation of our Named Executive Officers (Proposal No. 3) and the ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2020 (Proposal No. 4) requires the affirmative vote of a majority of the shares of common stock present in person or represented by proxy at the Annual Meeting and voted for or against the matter.

Effect of Abstentions

If a signed proxy is returned and the stockholder has specifically abstained from voting on any matter, the shares represented by such proxy will be considered present at the Annual Meeting for purposes of determining a quorum, but will not be considered to have been voted for or against such matter. As such, an abstention will have no effect on any of the proposals.

Effect of “Broker Non-Votes”

Brokers, banks or other agents holding shares in street name have discretionary authority to vote shares held for a beneficial owner on “routine” matters, such as the ratification of our independent registered public accounting firm, without instructions from the beneficial owner of those shares. However, absent instructions from the beneficial owner of such shares, brokers, banks or other agents holding shares in street name do not have discretionary authority to vote shares held for a beneficial owner on certain “non-routine” matters, such as Proposals No. 1 through No. 3.

If a signed proxy is returned by a broker, bank or other agent holding shares in street name that indicates that the broker does not have discretionary authority as to certain shares to vote on a proposal (“broker non-votes”), such shares will be considered present at the Annual Meeting for purposes of determining a quorum on all proposals, but will not be entitled to vote on and thus will have no effect on the outcome of any proposal.

Solicitation of Proxies and Expenses

We will bear the cost of soliciting proxies from our stockholders. Our directors, officers and employees, without additional compensation, may solicit proxies by mail, telephone, letter, facsimile, electronically or in person. Following the original mailing of the proxies and other soliciting materials, we will request that brokers, custodians, nominees and other record holders forward copies of the proxy and other soliciting materials to persons for whom they hold shares of common stock and request authority for the exercise of proxies. In such cases, we will reimburse such record holders for their reasonable expenses incurred for forwarding such materials.

Voting Results

The preliminary voting results will be announced at the Annual Meeting. The final voting results will be tallied by our Inspector of Elections and published in a Current Report on Form 8-K to be filed with the SEC within four business days of the Annual Meeting.

Delivery of Voting Materials to Stockholders Sharing an Address

To reduce the expense of delivering duplicate materials to stockholders sharing the same address, we have adopted a procedure approved by the SEC called “householding.” Under this procedure, certain stockholders of record who have the same address and last name will receive only one copy of the proxy materials sent to stockholders until such time as one or more of these stockholders notifies us that they wish to continue receiving individual copies. This procedure will reduce duplicate mailings and save printing costs and postage fees, as well as natural resources.

Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request “householding” of their communications should contact their broker.

How to Obtain a Separate Set of Voting Materials

Stockholders who received a househanded mailing this year, and would like to have additional copies of the proxy materials mailed to them, may submit their request to Investor Relations, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103 or by email to IR@glu.com. Stockholders may also contact us at the address or email above if they received multiple copies of the Annual Meeting materials and would prefer to receive a single copy in the future. Stockholders who would like to opt out of householding for future mailings may send a written request to Investor Relations at the above physical address or email address.

Annual Report on Form 10-K

A copy of our Annual Report on Form 10-K for the year ended December 31, 2019, including the financial statements, list of exhibits and any exhibit specifically requested, is available without charge upon written request to: Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103.

PROPOSAL NO. 1 – ELECTION OF CLASS I DIRECTORS

Our Board currently consists of ten directors. Our Restated Certificate of Incorporation and Bylaws provide for a classified Board, divided into three classes. At each annual meeting of stockholders, successors to the class of directors whose term expires at that annual meeting will be elected for a term to expire at the third succeeding annual meeting. The individuals so elected will serve until their successors are elected and qualified.

This year, the terms of our four Class I directors, Darla Anderson, Ben Feder, Hany M. Nada and Benjamin T. Smith, IV, will expire at the Annual Meeting.

The Board has nominated Darla Anderson, Ben Feder, Hany M. Nada and Benjamin T. Smith, IV to serve as Class I directors, each for a three-year term that is expected to expire at our annual meeting in 2023 or until his or her earlier resignation or removal (the “Board’s Nominees”). Our Nominating and Governance Committee reviewed the qualifications of the Board’s Nominees and unanimously recommended to the Board that they be submitted to stockholders for election. You can find the principal occupation and other information about the Board’s Nominees, as well as other Board members, below.

Three of our continuing directors are Class II directors, whose terms will expire at our 2021 annual meeting, and three of our continuing directors are Class III directors, whose terms will expire at our 2022 annual meeting.

The election of our Class I directors will be determined by the four nominees receiving the greatest number of votes from shares eligible to vote on the matter. Unless a stockholder signing a proxy withholds authority to vote for one or more of the Board’s Nominees in the manner described on the proxy card, each proxy received will be voted for the election of each of the Board’s Nominees. If any nominee is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for the nominee or nominees who shall be designated by the present Board to fill the vacancy. We are not aware that any of the Board’s Nominees will be unable or will decline to serve as a director.

There are no family relationships between any of our directors, nominees or executive officers.

On April 29, 2015, Glu agreed to issue in a private placement offering to a wholly-owned subsidiary of Tencent Holdings Limited (“Tencent”) an aggregate of 21,000,000 shares of Glu’s common stock at a purchase price of \$6.00 per share, for aggregate proceeds of \$126 million (the “Offering”). In connection with the Offering, Glu and Tencent became parties to a voting and standstill agreement (the “Voting Agreement”), pursuant to which Glu agreed to cause a representative of Tencent to be elected and appointed as a new member of the Board as a Class I director, and to subsequently nominate for future director elections a designee of Tencent on the Board. Ben Feder has served as the Tencent representative on the Board since January 26, 2017.

Tencent will continue to have a right to appoint one member to the Board so long as (1) Tencent and its controlled affiliates, continue to hold a net long ownership position of at least 5% of Glu’s outstanding shares and (2) Tencent or Tencent’s designee to the Board does not materially breach any material obligation to Glu under the Voting Agreement and a separate confidentiality agreement between the parties related to confidentiality and use limitations for information Mr. Feder (or a subsequent Tencent designee to the Board) obtains by virtue of serving on the Board, which breach is not cured within 30 days following Tencent’s receipt of written notice of such breach. Tencent, through its controlled affiliates, held 13.85% of Glu’s outstanding shares as of April 20, 2020. Other than the appointment of Mr. Feder by Tencent, there are no arrangements or understandings between any director, nominee or executive officer and any other person pursuant to which he or she has been or will be selected as a director and/or executive officer.

**The Board recommends that stockholders vote “FOR” the election of
Darla Anderson, Ben Feder, Hany M. Nada and Benjamin T. Smith, IV as Class I Directors.**

Information Regarding Our Nominees and Directors

Nominees for Class I Directors (whose terms expire at the Annual Meeting)

Darla Anderson (Age 60) Movie Producer

Ms. Anderson has served as one of our directors since March 2019. In January 2019, Ms. Anderson signed a multi-year development and production deal with Netflix to develop and produce new animated and live-action projects. From 1993 until March 2018, Ms. Anderson held various positions at Pixar Animation Studios, a computer animation film studio, most recently as a Producer. While at Pixar, Ms. Anderson contributed to a number of Pixar's hit movies, including *A Bug's Life*, *Monsters, Inc.*, *Cars* and *Toy Story 3*, and she produced *Coco* for which she earned an Academy Award for Best Animated Feature. Prior to joining Pixar, she served as the Executive Producer of the commercial division of Angel Studios, a video game developer. Since February 2020, Ms. Anderson has served as a director of dMY Technology Group, Inc., a blank check company whose business purpose is to effect a business combination with one or more businesses. Since July 2008, Ms. Anderson has served on the Producers Council Board of the Producers Guild of America. Ms. Anderson holds a B.A. in art from San Diego State University.

Ms. Anderson's proven track record in successfully producing high-caliber entertainment projects, her expertise in developing engaging and unique experiences to delight audiences and her ability to provide guidance to our creative leaders led the Board to conclude that she should serve as a director.

Ben Feder (Age 56) President, International Partnerships (North America) of Tencent Holdings Limited

Mr. Feder has served as one of our directors since January 2017 and was appointed to our Board by Tencent, which is a leading Internet and gaming company in China. Since October 2016, Mr. Feder has served as President, International Partnerships (North America) of Tencent. In addition, Mr. Feder serves on the boards of several private gaming companies as a representative of Tencent. From 2001 to October 2016, Mr. Feder served in various positions at ZelnickMedia Corporation, a media investment and management firm, including as co-founder, partner and vice chairman. From April 2007 to April 2010, Mr. Feder served as a member of the board of directors of Take Two Interactive Software Inc., or Take Two, a leading developer and publisher of video games, and from April 2007 to December 2010 he also served as Chief Executive Officer of Take Two. Prior to co-founding ZelnickMedia in 2001, Mr. Feder was Chief Executive Officer of MessageClick, Inc., a leading provider of voice messaging technology for next-generation telephone networks, and held a senior position with News Corporation. Mr. Feder received a B.A. in history from Columbia University and an M.B.A. from the Harvard Business School.

Mr. Feder's deep knowledge of the gaming industry, including his leadership experience at both Tencent and Take Two, led the Board to conclude that he should serve as a director.

Hany M. Nada (Age 51) Co-Founder and Managing Partner, ACME Capital

Mr. Nada has served as one of our directors since April 2005. Mr. Nada co-founded ACME Capital, a venture capital firm, in January 2019 and serves as the firm's Managing Partner. Prior to co-founding ACME Capital, Mr. Nada co-founded GGV Capital (formerly Granite Global Ventures) in 2000 and served as a Managing Director until October 2016 and as a Venture Partner from November 2016 until October 2018. Prior to co-founding GGV Capital, Mr. Nada served as Managing Director and Senior Research Analyst at Piper Jaffray & Co., specializing in Internet software and e-infrastructure. Mr. Nada serves on the boards of directors of several privately held companies, including Arcbyt, DraftKings, Inc., Phoenix Labs, and WildTangent, Inc., and was previously on the board of directors of Vocera Communications, Inc., a publicly traded company. In addition, Mr. Nada is an observer on the board of directors of Houzz, Inc., IonQ Inc. and Uhnder, Inc. Mr. Nada holds a B.S. in economics and a B.A. in political science from the University of Minnesota.

Mr. Nada's experience in the venture capital industry, which includes a focus on software, wireless applications, and multimedia, his expertise and insights into high technology companies that he gained during his tenure as Managing Director and Senior Research Analyst at Piper Jaffray & Co., his experience as a director of high technology companies and his relationship with entities owning a significant percentage of our common stock led the Board to conclude that he should serve as a director.

Benjamin T. Smith, IV (Age 52)
Senior Partner, A.T. Kearney

Mr. Smith has served as one of our directors since November 2010, interim co-Lead Independent Director from July 2014 to December 2014 and Lead Independent Director since April 2016. Mr. Smith has been a Senior Partner at the strategic consulting firm, A.T. Kearney, since October 2016 and prior to that served as the Chief Executive Officer of Wanderful Media, a new media shopping company, from April 2012 to June 2016. Prior to joining Wanderful Media, Mr. Smith served as an independent director of and advisor to technology companies, including in his role as a Venture Partner at Accelerator Venture Capital, where he has served since December 2011. Previously, Mr. Smith served as the Chairman and Chief Executive Officer of WYBS, Inc. d/b/a MerchantCircle, a leading social network of small business owners, from when he co-founded the company in August 2004 until the company was sold to Reply.com in May 2011. Mr. Smith served as the Senior Vice President of Corporate Development and a strategic advisor to Borland Software Corporation, a vendor of Open Application Lifecycle Management solutions, from March 2005 to October 2007 and the Chief Executive Officer of, and an advisor to, CodeGear, a division of Borland, from November 2006 to October 2007. Mr. Smith previously co-founded Spoke Software, Inc., a provider of social networking software that connects business professionals, in 2002, and served as its Chief Executive Officer from 2002 to 2004. Mr. Smith also served the Bush Administration as the Senior Advisor for Strategy and Planning to the Secretary of Transportation from 2001 to 2002. Prior to then, Mr. Smith was a Vice President and Partner at A.T. Kearney, and Vice President, Venture Development at Electronic Data Systems Corporation (EDS) after A.T. Kearney was purchased by EDS. In addition, Mr. Smith serves as an advisor or investor in several other private companies and provides advisory services to a number of high-technology companies. He also advised and led the board of directors of Tapulous Inc., a mobile social gaming company, from its founding in 2009 until its sale to The Walt Disney Company in July 2010. Mr. Smith holds a B.S. in mechanical engineering from the University of California at Davis and an M.B.A. from Carnegie Mellon University's Tepper School of Business.

Mr. Smith's extensive operating and investment experience in the social networking and gaming industries, which includes having co-founded two social networking companies, and his experience as a director of and strategic consultant to high-technology companies led the Board to conclude that he should serve as a director.

Continuing Class II Directors (whose terms expire at the 2021 Annual Meeting of Stockholders)

Eric R. Ball (Age 56)
General Partner, Impact Venture Capital

Dr. Ball has served as one of our directors since October 2013. Dr. Ball serves as General Partner of Impact Venture Capital, a technology investment firm, a position he has held since August 2016. Before joining Impact Venture Capital, Dr. Ball was Chief Financial Officer of C3, Inc. (doing business as C3 IoT), a full-stack development platform for the "Internet of Things," from August 2015 to May 2016. Prior to then, Dr. Ball served as Senior Vice President and Treasurer of Oracle Corporation, a global computer technology company, from May 2005 to September 2015. Before joining Oracle, Dr. Ball worked in a variety of headquarters and operating finance roles at Flextronics, Inc., Cisco Systems, Inc., Avery Dennison, and AT&T Inc. Dr. Ball serves as an advisor to Kyriba Corporation and SineWave Ventures, and since March 2017 as a board member to Answers Corporation. Dr. Ball holds an B.A. in economics from the University of Michigan, an M.A. in economics/finance and an M.B.A. from the University of Rochester and a Ph.D. in management from the Drucker-Ito School of Management.

Dr. Ball's more than 20 years of experience in finance and operations with technology companies, particularly those larger than Glu, led the Board to conclude that he should serve as a director. In addition, our Board's determination in light of his experience as a finance executive and director overseeing or assessing the performance of companies and public accountants, that Dr. Ball is an "audit committee financial expert" lends further support to his financial acumen and qualifications for serving on our Board.

Nick Earl (Age 54)**President and Chief Executive Officer, Glu Mobile Inc.**

Mr. Earl has served as our President and Chief Executive Officer since November 2016 and prior to that was our President of Global Studios from November 2015 to November 2016. Before joining us, from November 2014 to September 2015, Mr. Earl served as President of Worldwide Studios at Kabam. From September 2001 to October 2014, Mr. Earl served in several management positions at Electronic Arts, including most recently as Senior Vice President & General Manager of EA Mobile. From 1999 to 2001, Mr. Earl served as VP Product Development at Eidos. From April 1993 to March 1999, Mr. Earl served as an executive producer / GM at The 3DO Company. Mr. Earl holds a B.A. in economics from the University of California at Berkeley.

Mr. Earl's experience as our President and Chief Executive Officer, which gives him unique insights into our challenges, opportunities and operations, and his strong background of senior management in the mobile gaming sector led the Board to conclude that he should serve as a director.

Ann Mather (Age 60)**Independent Director of and Advisor to Technology and Media Companies**

Ms. Mather has served as one of our directors since September 2005. She has also served as a member of the board of directors of: Alphabet Inc. since November 2005 and serves as chair of its audit committee; Netflix, Inc. since July 2010 and serves as chair of its audit committee; MGM Holdings Inc. since December 2010 and serves as lead independent director; Shutterstock, Inc. since May 2013 and serves on its audit committee; Arista Networks, Inc. since July 2013 and serves as chair of its audit committee and Airbnb, Inc. since August 2018. Ms. Mather has also been an independent trustee to the Dodge & Cox Funds board of trustees since May 2011. From 1999 to 2004, Ms. Mather was Executive Vice President and Chief Financial Officer of Pixar, Inc. Prior to her service at Pixar, Ms. Mather was Executive Vice President and Chief Financial Officer of Village Roadshow Pictures, the film production division of Village Roadshow Limited. Ms. Mather holds an M.A. in geography from Cambridge University in England.

Ms. Mather's experience as the chief financial officer of two companies, including a publicly traded company, her international experience gained through several executive positions in Europe and her experience as a director of high technology companies led the Board to conclude that she should serve as a director.

Continuing Class III Directors (whose terms expire at the 2022 Annual Meeting of Stockholders)**Niccolo M. de Masi (Age 39)****Chief Executive Officer and Director, dMY Technology Group, Inc.
Chairman, Glu Mobile Inc.**

Mr. de Masi has served as our Chairman since November 2019, as our Executive Chairman from November 2016 to November 2019, as President and Chief Executive Officer from January 2010 to November 2016, as one of our directors since January 2010, as interim Chairman of our board of directors from July 2014 to December 2014 and as the Chairman of our board of directors since December 2014. Since January 2020, Mr. de Masi has served as the Chief Executive Officer and a director of dMY Technology Group. Since February 2019, Mr. de Masi has served as the Chief Innovation Officer of Resideo Technologies, Inc., a provider of residential comfort and security solutions, and previously Mr. de Masi also served as the President of the Products and Solutions segment of Resideo Technologies from February 2019 to January 2020. Prior to joining Resideo Technologies, Mr. de Masi served as the President of Essential, a mobile phone hardware company, from November 2016 to October 2018. Prior to joining Glu in January 2010, Mr. de Masi was the Chief Executive Officer and President of Hands-On Mobile, a mobile technology company and developer and publisher of mobile entertainment, from October 2009 to December 2009, and previously served as the President of Hands-On Mobile from March 2008 to October 2009. Prior to joining Hands-On Mobile, Mr. de Masi was the Chief Executive Officer of Monsternob Group PLC, a mobile entertainment company, from June 2006 to February 2007. Mr. de Masi joined Monsternob in 2004 and, prior to becoming its Chief Executive Officer, held positions as its Managing Director and as its Chief Operating Officer, where he was responsible for formulating and implementing Monsternob's growth and product strategy. Prior to joining Monsternob, Mr. de Masi worked in a variety of corporate finance and operational roles within the technology, media and telecommunications (TMT) sector, beginning his career with JP Morgan on both the TMT debt capital markets and mergers and acquisitions teams in London. He has also worked as a physicist with Siemens Solar and within the Strategic Planning and Development divisions of Technicolor. Mr. de Masi previously served as a director of Resideo Technologies from October 2018 to January 2020 and Xura, Inc. from November 2015 until its sale in

August 2016. Mr. de Masi holds an M.A. degree in physics and an MSci. degree in electronic engineering—both from Cambridge University.

Mr. de Masi's successful tenure as our President and Chief Executive Officer and current position as Chairman, which gives him unique insights into our challenges, opportunities and operations, and his strong background of senior management and executive experience in the mobile gaming and content sectors led the Board to conclude that he should serve as a director.

Greg Brandeau (Age 58)

Managing Partner, Paradox Strategies

Mr. Brandeau has served as one of our directors since August 2015. Since May 2014, Mr. Brandeau has served as Managing Partner of Paradox Strategies (fka Slices of Genius), a consulting organization founded by Mr. Brandeau. He served as President and Chief Operating Officer of Maker Media, Inc., a global platform for connecting makers with each other, with products and services, and with partner organizations, from September 2013 to April 2014. Prior to Maker Media, Mr. Brandeau served as Chief Technology Officer of The Walt Disney Studios, a motion picture studio, from November 2009 to April 2012. Prior to that, he served as Senior Vice President of Technology for Pixar Animation Studios, a computer animation studio, from February 2004 to November 2009. Mr. Brandeau is an Advisory Board Member for Infrascala, Inc. and the California Institute for Telecommunications and Information Technology, and a member of the Visiting Committee for the Humanities at the Massachusetts Institute of Technology. In addition to his prior technology management roles at Maker Media, The Walt Disney Studios and Pixar, he has served in various technology management roles for Walt Disney Animation Studios, Perlegen Sciences Inc., NeXT Computer, Inc. and Mountain Network Solutions, Inc. He is the co-author of *Collective Genius: The Art and Practice of Leading Innovation*. Mr. Brandeau holds B.S and M.S degrees in electronic engineering from the Massachusetts Institute of Technology, and an M.B.A. from Duke University.

Mr. Brandeau's strong background in technology management, particularly through his experiences in senior technology management roles at dynamic and innovative companies like Disney, Pixar, and NeXT Computer, led the Board to conclude that he should serve as a director.

Gabrielle Toledano (Age 53)

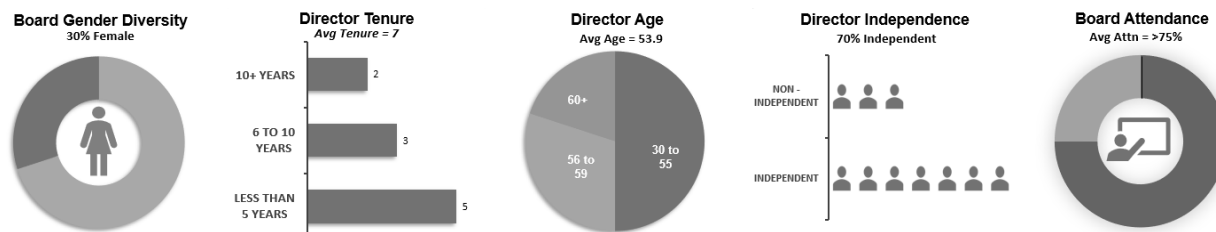
Chief Operating Officer, Keystone Strategy

Ms. Toledano has served as one of our directors since December 2017. Since January 2020, Ms. Toledano has served as Chief Operating Officer at Keystone Strategy LLC, a strategy and economics consulting firm. Prior to that, Ms. Toledano served as an Executive in Residence for Comcast Ventures, a corporate venture capital firm, from January 2019 to December 2019. From May 2017 to October 2018, Ms. Toledano served as the Chief People Officer of Tesla Inc., a manufacturer of electric vehicles and energy storage products. From December 2016 to May 2017, Ms. Toledano served as an Advisor to, and from February 2006 to December 2016 as the Chief Talent Officer and Executive Vice President at, Electronic Arts Inc., an interactive entertainment software company. From February 2017 to March 2017, she served as a consultant to Slack Technologies, Inc., a software company. Prior to joining Electronic Arts, from 2002 to 2006 Ms. Toledano served as Chief Human Resources Officer at Siebel Systems, Inc., a supplier of customer software solutions and services. From 1991 to 2002, Ms. Toledano served in various human resources positions at Microsoft Corporation and Oracle Corporation. Ms. Toledano has served as a director of Namely, Inc. since February 2019 and Visier Inc. since May 2014, and previously served as a director of TalentSky from January 2015 to January 2019, Jhana from November 2016 to July 2017, Jive Software from November 2015 to June 2017, Big City Mountaineers from May 2011 to September 2014, and the Society of Human Resource Management from February 2009 to July 2011. In addition, Ms. Toledano has advised several technology companies in the Human Capital Management space, including Collective Health, a healthcare platform company, Espresa, an employee programs automation platform provider, and Betterworks, an enterprise collaboration platform provider. Ms. Toledano holds a B.A. in modern thought and literature and an M.A. in education from Stanford University.

Ms. Toledano's strong background in gaming and technology management, including her extensive experience as an executive in the Human Resources field of various public companies, and her broad experience as a director of technology companies led the Board to conclude that she should serve as a director.

CORPORATE GOVERNANCE

Our Board has adopted Corporate Governance Principles that are designed to assist the Board in observing practices and procedures that serve the best interests of Glu and our stockholders. The Nominating and Governance Committee oversees these Corporate Governance Principles and periodically makes recommendations to the Board regarding any changes. These Corporate Governance Principles address, among other things, our policy on succession planning and senior leadership development, retirement, Board performance evaluations and committee structure, as well as Board diversity.



Director	Age (Years)	Tenure (Years)	Independence	Gender	Attendance
Darla Anderson	60	1	Yes	F	>75%
Eric R. Ball	56	6	Yes	M	>75%
Greg Brandeau	58	4	Yes	M	>75%
Niccolo M. de Masi	39	10	No	M	>75%
Nick Earl	54	3	No	M	>75%
Ben Feder	56	3	No	M	>75%
Ann Mather	60	15	Yes	F	>75%
Hany M. Nada	51	15	Yes	M	>75%
Benjamin T. Smith, IV	52	9	Yes	M	>75%
Gabrielle Toledano	53	2	Yes	F	>75%

We maintain a corporate governance page on our company website that includes key information about corporate governance matters, including copies of our Corporate Governance Principles, our Code of Business Conduct and Ethics for all employees, including our senior executive and financial officers, and the charter for each Board committee. The link to this corporate governance page can be found at <http://www.glu.com/investors> (by clicking on the “corporate governance” link).

Board and Committee Self-Evaluation

The Board conducts a self-evaluation of the performance, composition, leadership structure, and governance of the Board and its Committees at least annually. The evaluation format and process is supervised by the Chair of the Nominating and Governance Committee. The evaluation is typically conducted as a written self-assessment, followed by an opportunity to provide feedback on Board performance and diversity, and to raise any concerns that an individual director may have in interviews with the Chair of our Nominating and Governance Committee and an independent third party advisor. Based upon the assessment results, the Board agrees on improvement goals and tracks its progress against those goals over time. The Board has engaged and paid fees to a third-party advisor to assist in performing the Board evaluation and may do so again in the future. Generally, our legal advisors assist with the Board evaluation on an annual basis. The Nominating and Governance Committee strives to embed honest feedback into the Board’s culture and set a tone of open and transparent dialogue throughout the assessment process.

Evaluations of candidates generally involve a review of background materials, internal discussions and interviews with selected identified candidates as appropriate. In conducting its review and evaluation, the Nominating and Governance Committee may solicit the views of management, other members of the Board and other individuals it believes

may have insight into a candidate's qualifications and the needs of the Board and its committees. Candidates for the Board are generally selected based on desired skills and experience in the context of the existing composition of the Board and needs of the Board and its committees at that time, including the requirements of applicable rules and regulations of the SEC and The Nasdaq Stock Market. The Nominating and Governance Committee will consider these needs and further evaluate each candidate's qualifications based on their independence, integrity, collegiality, diversity, skills, financial, technical, operational and other expertise and experience, breadth of experience, practical wisdom, judgment, knowledge about our business or industry, personal and professional ethics, availability and commitment to representing and enhancing the long-term interests of our stockholders. The Nominating and Governance Committee may also identify and consider other factors that reflect our environment as it evolves or that it believes will otherwise contribute to the Board's overall effectiveness and our success. In accordance with our Corporate Governance Principles and our Nominating and Governance Committee Charter, the Nominating and Governance Committee also considers nominees from diverse backgrounds who combine a broad spectrum of experience and expertise. The Nominating and Governance Committee does not assign specific weights to particular criteria, and no particular criterion is necessarily applicable to all candidates. The Nominating and Governance Committee will choose candidates to recommend for nomination based on the specific needs of the Board and Glu at that time. Although the Nominating and Governance Committee uses these and other criteria as appropriate to evaluate candidates, the Nominating and Governance Committee has no stated minimum criteria for candidates. All candidates, including those nominated by stockholders, are evaluated in the manner described above. Final approval of nominees to be presented for election is determined by the full Board.

Board Diversity Policy

The Board believes that maintaining a diverse membership with varying backgrounds, skills, expertise and other differentiating personal characteristics promotes inclusiveness, enhances the Board's deliberations and enables the Board to better represent all of Glu's constituents, including its diverse customer base and workforce. Accordingly, the Board is committed to seeking out highly qualified candidates with diverse backgrounds, skills and experiences as part of each Board search we undertake. To further this goal and to focus on this commitment, the Board and the Nominating and Governance Committee have amended the Corporate Governance Principles and the Nominating and Governance Committee charter accordingly. These considerations and goals have been important factors in the Board's refreshment efforts, which have included the addition of Ms. Toledano to our Board in December 2017 and Ms. Anderson in March 2019.

Board Responsibilities and Leadership Structure

Our Board oversees management's performance on behalf of our stockholders. The Board's primary responsibilities are to (1) select, oversee and determine compensation for our President and Chief Executive Officer who, with senior management, manages our day-to-day operations, (2) monitor management's performance to assess whether we are operating in an effective, efficient and ethical manner to create value for our stockholders and (3) periodically review our long-term plans, business initiatives, capital projects and budget matters.

The Board and its committees meet throughout the year on a set schedule, and also hold special meetings and act by written consent from time to time as appropriate. The Board held six meetings during 2019 and acted once by unanimous written consent. The independent directors meet without management present at regularly scheduled executive sessions, and in 2019 the independent directors held executive sessions at a total of four Board meetings. The Board has delegated certain responsibilities and authority to the committees described below. Committees report regularly to the full Board on their activities and actions.

The Board designated Mr. de Masi as its interim Chairman in July 2014, as its Chairman in December 2014, as its Executive Chairman in November 2016 and as its Chairman in November 2019. The Board believes that it should maintain flexibility to select its Chairman and board leadership structure from time to time. The Board believes that it is currently in the best interest of Glu and its stockholders for Mr. de Masi to serve as Chairman in light of his knowledge of our company and our industry, his previous role as Chief Executive Officer, his experience executing successful strategic acquisitions and investments, and his ability to support Mr. Earl in his role as Glu's Chief Executive Officer.

The Board has also established a Lead Independent Director position, which the Board believes provides an appropriate balance in our leadership. In April 2016, the Nominating and Governance Committee recommended to the Board the appointment of Mr. Smith as the Lead Independent Director, which appointment was subsequently approved by the Board.

The Lead Independent Director role helps to ensure a strong, independent and active Board. The Lead Independent Director must be “independent” under the rules of the Nasdaq Stock Market (“Nasdaq”) and is appointed by the Board. Our Lead Independent Director has a robust role in our board process, including responsibility for:

- presiding at all meetings of the Board at which the Chairman is not present, including executive sessions of the independent directors;
- serving as the liaison between the Chairman and the independent directors;
- having the authority to call special meetings of the Board;
- encouraging direct dialogue between all directors (particularly those with dissenting views) and management;
- being available for communications with our stockholders; and
- performing such other functions and responsibilities as requested by the Board from time to time.

The proper discharge of the Board’s fiduciary duties to Glu and its stockholders requires it to retain the flexibility to determine the person or persons best suited for the roles of Chairman and Chief Executive Officer. Accordingly, the Board has determined that its selections of Mr. de Masi as Chairman and Mr. Earl as Chief Executive Officer are consistent with its fiduciary duties to retain individuals that are best suited for these positions. The Lead Independent Director role provides a necessary layer of independent oversight of Board matters and ensures effective communication between management and the independent directors, which increases the independent directors’ understanding of management decisions and our operations. As such, the Board of Directors believes that its leadership structure is appropriate.

Insider Trading, Hedging, Pledging and Short-Selling Policies

Our Insider Trading Policy prohibits our directors, officers, employees and contractors from purchasing or selling Glu securities while in possession of material, non-public information. In order to ensure that trading is conducted only at times when our directors, officers and certain employees with regular access to confidential information about Glu or our business are not aware of material nonpublic information about us, our Insider Trading Policy requires that each such person pre-clear any proposed trades of our stock with our General Counsel.

In addition, our Insider Trading Policy prohibits all directors, officers and employees from short-selling Glu stock, or engaging in hedging or monetization transactions, such as where they may acquire, sell, or trade in any interest or position relating to the future price of Glu securities, such as a put option or a call option, zero cost collars and forward sale contracts or any other type of derivative security, and they may not contribute Glu securities to exchange funds that could be interpreted as having the effect of hedging. These policies were established in part because there is often a conflict of interest involved when an employee bets against our performance. Our officers and directors are also prohibited from pledging any Glu securities as collateral in a margin account or for a loan unless such pledge (or any modification of an existing pledge) is approved by Glu’s Insider Trading Compliance Officer and the Nominating and Governance Committee.

Role of the Board in Risk Oversight

One of our Board’s key functions is providing oversight of our risk management process. The Board does not have a standing risk management committee but rather administers this oversight function directly through the Board as a whole, as well as through the Board’s standing committees that each address risks inherent in their respective areas of oversight. In particular, our Audit Committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, our Compensation Committee assesses and monitors whether any of our compensation policies and programs have the potential to encourage excessive risk-taking, our Nominating and Governance Committee monitors our major legal compliance risk exposures and our program for promoting and monitoring compliance with applicable legal and regulatory requirements, and our Board is responsible for monitoring and assessing strategic risk exposure and other risks not covered by our committees.

The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives reports on the risks we face from our Board committee chairpersons, Chairman, Chief Executive Officer or other members of management to enable us to understand our risk identification, risk management and risk mitigation strategies regarding strategic and operational risks, including but not limited to cybersecurity risk. For additional information regarding our cybersecurity efforts, please see “Corporate Social Responsibility—*Cybersecurity Risk Oversight*” below.

When a committee receives the report, the chairman of that committee reports on the discussion to the full Board at the next Board meeting. However, the committee chairs are responsible for reporting findings regarding material risk exposures to the Board as quickly as possible. We believe that our Board's leadership structure supports effective risk management because it allows our Lead Independent Director and the other independent directors on our committees to exercise oversight over management.

Director Independence

Our Board currently includes seven independent directors, three of whom are standing for election at the Annual Meeting. To be considered independent under the rules of The Nasdaq Stock Market, referred to as the Nasdaq listing rules, a director may not be employed by Glu or engage in certain types of business dealings with us. In addition, as required by the Nasdaq listing rules, the Board has made a determination as to each independent director currently serving on the Board or who served on the Board during 2019 that no relationship exists which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, the Board reviewed and discussed information provided by the directors and by our management with regard to each director's business and personal activities as they relate to Glu and our management. In assessing director independence under the Nasdaq listing rules, the Nominating and Governance Committee and the full Board reviewed relevant transactions, relationships and arrangements that may affect the independence of our Board members, including that:

- Mr. Feder was during 2019, and currently is, an officer of Tencent, and wholly-owned subsidiaries of Tencent owned in the aggregate 13.85% of our outstanding capital stock as of April 20, 2020; and
- Ms. Mather was during 2019, and currently is, a director of Alphabet Inc., the parent company of Google Inc., with which we conduct business in the ordinary course and revenues from which represented 33.5% of our total revenues in 2019.

After reviewing these transactions and other relevant standards, the Board determined that each of Ms. Anderson, Dr. Ball, Mr. Brandeau, Ms. Mather, Mr. Nada, Mr. Smith and Ms. Toledano is an independent director.

Attendance at Board, Committee and Annual Stockholders Meetings

The Board expects that each director will prepare for, attend and participate in all Board and applicable committee meetings and that each Board member will see that other commitments do not materially interfere with his or her service on the Board. Our Corporate Governance Principles provide that non-employee directors may not serve on the boards of more than five public companies, and our Chief Executive Officer may not serve on the boards of more than two public companies, in each case including Glu.

No director attended fewer than 75% of the aggregate number of meetings of the Board and the committees on which he or she served in 2019. None of our directors, except for Nick Earl, attended the 2019 Annual Meeting of Stockholders. Under our Corporate Governance Principles, all directors are encouraged to attend the annual meetings of our stockholders.

Board Committees and Charters

The Board currently has a standing Audit Committee, Compensation Committee, Nominating and Governance Committee and Strategy Committee. The members of each committee are appointed by the Board based on recommendations of the Nominating and Governance Committee. Each member of the Audit Committee, the Compensation Committee and the Nominating and Governance Committee is an independent director as determined by the Board in accordance with the Nasdaq listing rules. On the Strategy Committee, each of Messrs. de Masi, Earl and Feder are considered non-independent under the Nasdaq listing. Each of the Audit Committee, Compensation Committee and Nominating and Governance Committee annually reviews its charter and makes recommendations to our Board for revision to reflect changes in laws and regulations and evolving best practices. Copies of each charter can be found on our website at <http://www.glu.com/investors> (by clicking on the "corporate governance" link). Current committee members are as follows:

Director	Audit Committee	Compensation Committee	Nominating and Governance Committee	Strategy Committee
Darla Anderson	—	—	—	Member
Eric R. Ball	Chair	—	—	—
Greg Brandeau	—	Member	Chair	—
Niccolo M. de Masi	—	—	—	Chair
Nick Earl	—	—	—	Member
Ben Feder	—	—	—	Member
Ann Mather	—	—	Member	—
Hany M. Nada	Member	Member	—	Member
Benjamin T. Smith, IV	Member	Member	Member	Member
Gabrielle Toledano	—	Chair	—	—

Audit Committee	Responsibilities
<i>As specified in its charter, the responsibilities of the Audit Committee include the following:</i>	
Current Members: Eric R. Ball, Chair Hany M. Nada Benjamin T. Smith, IV Former Members Who Served During FY 2019: None Fiscal 2019 Actions: Regular Meetings - 8 Special Meetings - 0 Actions by Written Consent - 0 Purpose: The purpose of the Audit Committee is to assist the Board in fulfilling its statutory and fiduciary oversight responsibilities relating to our financial accounting, reporting and controls. Independence The composition of our Audit Committee meets the requirements for independence under the current Nasdaq listing rules and rules and regulations of the SEC. Each member of our Audit Committee is financially literate. Our Board has determined that Dr. Ball is an "audit committee financial expert" as defined in Item 407(d) of Regulation S K.	❖ Review and discuss with the independent auditors and management our quarterly and annual financial results and related earnings press release, and periodically discuss on a general basis with management the type of information to be disclosed and type of presentation to be made regarding released financial information. ❖ Review our quarterly and annual financial statements, including any report on our internal control over financial reporting, and any report or opinion by the independent auditors prior to distribution to the public or filing with the Commission. ❖ Review and discuss with the independent auditors and management their periodic reviews of the adequacy of our accounting and financial reporting processes and systems of internal control, including any significant deficiencies and material weaknesses in their design or operation. ❖ Periodically consult with the independent auditors out of the presence of management about internal controls, the fullness and accuracy of our financial statements and any other matters that the Committee or these groups believe should be discussed privately with the Committee. ❖ Be directly responsible for the selection, compensation, retention and oversight of the work of the independent auditors, who will report directly to the committee. Recommend to the Board the appointment or discharge of the independent auditors.
Compensation Committee	Responsibilities:
<i>As specified in its charter, the responsibilities of the Compensation Committee include the following:</i>	
Current Members: Gabrielle Toledano, Chair¹ Greg Brandeau Hany M. Nada Benjamin T. Smith, IV¹ Former Members Who Served During FY 2019: None Fiscal 2019 Actions: Regular Meetings - 7 Special Meetings - 0 Actions by Written Consent - 5 Purpose: The Compensation Committee has principal responsibility to evaluate, recommend, approve and review executive officer compensation arrangements, plans, policies and programs maintained by us, and to administer our cash-based and equity-based compensation plans (including issuance of stock options and other equity-based awards granted other than pursuant to a plan). Independence The composition of the Compensation Committee meets the requirements for independence under the current Nasdaq listing rules, rules and regulations of the SEC and the Internal Revenue Code (the "Code").	❖ Annually review and approve the corporate goals and objectives to be considered in determining the compensation of our CEO and other NEOs. ❖ Annually review our overall compensation strategy including base salary, incentive compensation, and equity-based grants to insure that it aligns with stakeholder interests and provides appropriate incentives for executives. ❖ Review and approve policies and procedures relating to perquisites and expense accounts of the CEO and other Executive Officers. ❖ Periodically review and approve or make recommendations to the Board with respect to adoption and approval of, or amendments to, all cash-based and equity-based incentive compensation plans and arrangements, and the cash amounts and aggregate numbers of shares reserved for issuance thereunder after taking into consideration our strategies with respect to cash-based and equity-based compensation. ❖ Review with management our major compensation-related risk exposures and the steps management has taken to monitor or mitigate such exposures. ❖ Working with the Nominating and Governance Committee, recommend to the Board, the form and amount of cash-based and equity based compensation to be paid or awarded to our non-employee directors, including compensation for service on the Board or on committees of the Board. ❖ The Committee will have the sole authority to approve the fees and other retention terms of such advisers. We will provide for appropriate funding, as determined by the Committee, for payment of compensation to any legal counsel, compensation and other consultants, accountants, experts and advisers retained by the Committee.
1. Mr. Smith served as Chair of the Committee until April 2019, at which time Ms. Toledano assumed the role of Chair.	

Nominating and Governance Committee

Current Members:
Greg Brandeau, Chair
Ann Mather
Benjamin T. Smith, IV

Former Members Who Served During FY 2019:
None

Fiscal 2019 Actions:
Regular Meetings - 2
Special Meetings - 0
Actions by Written Consent - 0

Purpose:
The purpose of the Committee is to ensure that the Board is properly constituted to meet its fiduciary obligations to our stockholders, and to assist the Board with respect to corporate governance matters.

Independence

The composition of our Nominating and Governance Committee meets the requirements for independence under the current Nasdaq listing rules and rules and regulations of the SEC.

Responsibilities:

As specified in its charter, the responsibilities of the Nominating and Governance Committee include the following:

- ❖ Develop and recommend policies regarding director nomination.
- ❖ Determine the desired qualifications, expertise and characteristics of Board members, with the goal of assembling a Board in which the directors will contribute to the range of talent, skill and expertise appropriate for the Board and to further our overall corporate goals.
- ❖ Identify and recruit qualified candidates for Board membership to fill new or vacant positions on the Board, consistent with criteria approved by the Board.
- ❖ Consider nominations properly submitted by our security holders in accordance with the procedures set forth in our Bylaws or determined by the Committee from time to time.
- ❖ Oversee inquiries into the backgrounds and qualifications of potential candidates for membership on the Board, including annual review of the independence of the non-employee directors and members of the Committee and the Audit Committee, Compensation Committee and other independent committees of the Board.
- ❖ Consider the desirability of procedures for the retirement or replacement of Board members, and, if the Committee deems appropriate, review and recommend to the Board adoption or amendment of such procedures.
- ❖ Recommend to the Board for selection all nominees to become members of the Board by appointment or to be proposed by the Board for election by the stockholders, including recommendation of a slate of director nominees to be proposed by the Board for election at each annual meeting of stockholders and recommendation of all director nominees to be elected by the Board or stockholders to fill interim director vacancies.

Strategy Committee

The Strategy Committee currently consists of six of our directors, Mr. de Masi, who became the committee chair in January 2020, Ms. Anderson and Messrs. Earl, Feder, Nada and Smith; Mr. Smith had been the committee chair prior to Mr. de Masi. Our Strategy Committee assists the Board and senior management in refining our strategic vision and growth initiatives.

Compensation Committee Interlocks and Insider Participation

During 2019, Messrs. Brandeau, Nada and Smith and Ms. Toledano each served on the Compensation Committee. None of these individuals is or has been an officer or employee of Glu or any of our subsidiaries. There are no other relationships between committee members and Glu or any other company that are required by SEC regulations to be disclosed under this caption.

Risk Analysis of Performance-Based Compensation Plans

The Compensation Committee believes that our executive compensation programs do not encourage excessive and unnecessary risk-taking. The design of our compensation programs is intended to encourage our executive officers to remain focused on both our short-and long-term financial goals in several key respects. Focusing on a strong pay-for-performance culture for our executive compensation program, the Compensation Committee decided in December 2019 to continue (1) replacing cash bonuses for each of our executive officers other than our General Counsel with performance-based restricted stock units (“PSUs”) for 2020 and (2) having a significant portion of each executive officer’s annual equity award be comprised of PSUs in addition to standard time vesting restricted stock units (“RSUs”). The committee believed that this focus will better align the interests of our executive officers with our stockholders and is consistent with our strategic goals of realizing significant bookings and Adjusted EBITDA growth in 2020 and beyond. All PSUs granted to our executive officers in 2019 (other than the PSUs granted in lieu of annual cash bonuses) vest over three years and the time-vesting RSUs vest over four years, encouraging executive officers to focus on sustained stock price appreciation over the long term. Additionally, our Board adopted a clawback policy in 2017 which authorizes our Board to recoup past incentive compensation paid to executive officers in certain situations and our Board is able to include clawback provisions in award agreements for our executive officers. Finally, our system of internal controls over financial reporting, standards of business conduct and compliance programs, among other things, reduce the likelihood of manipulation of our financial performance to enhance payments under our executive bonus plan.

Corporate Social Responsibility

Cybersecurity Risk Oversight and Data Privacy

Our Board is committed to mitigating data privacy and cybersecurity risks and recognizes this issue's importance as part of our risk management framework. Our cybersecurity program is overseen by the Board, the Audit Committee and Mr. Brandeau, given his extensive information technology expertise. In order to defend against and respond to the threat of security breaches and cyberattacks, we have developed a comprehensive program that is designed to protect and preserve the confidentiality, integrity and continued availability of all information and systems owned by or in the care of Glu. This program also includes a cyber incident response plan that provides controls and procedures for timely and accurate reporting of any material cybersecurity incident. Our Vice President, Global Customer and Technical Operations periodically reviews our cybersecurity program with Mr. Brandeau and presents quarterly reports on the program to the Audit Committee, which is tasked with oversight of such risk issues. These updates include a report on the top cybersecurity risks and counter measures implemented by Glu as well as reporting on any other current cybersecurity projects. Mr. Brandeau and Mr. Ball regularly brief the full Board on these matters, and our Vice President, Global Customer and Technical Operations reviews our cybersecurity program with the full Board at least annually.

In addition to active Board oversight, we have posted on our website a privacy notice explaining how certain personal information is collected, used and disclosed by Glu and its subsidiaries. We also perform worldwide annual live employee trainings on our data protection and security practices. We certified under the EU-U.S. and the Swiss-U.S. Privacy Shield Frameworks with the U.S. Department of Commerce and have data processing agreements in place with our business partners who process personal data for us. Further, we monitor existing and upcoming privacy laws, rules and regulations and we undertook significant efforts to comply with the European Union's General Data Protection Regulation, which became effective in May 2018 and the California Consumer Privacy Act of 2018, which became effective in January 2020.

Sustainability

We are increasingly focused on sustainability initiatives to reduce our energy consumption, carbon footprint, waste and materials consumption. We strive to engage both our employees and suppliers in our sustainability efforts. Our San Francisco headquarters is located in an Energy Star™-rated building and offers employees public transportation, bike parking and an electric car charging station to reduce Source 3 emissions. When considering locations for facilities, we prioritize proximity to public transportation, and we have established pre-tax and subsidy public transportation programs to encourage employees to use public transportation when commuting to and from the office, in an effort to improve air quality, reduce traffic congestion, and conserve energy. We will continue to evaluate how to reduce Glu's carbon footprint and our employees' carbon footprint over time. We are also focused on reducing our use of disposable materials in our offices and have recycling programs in place at our North American facilities.

Diversity, Inclusion and Workforce

Human capital management, including our diversity and inclusion initiative, is a key driver of our success. We believe that a diverse, inclusive culture yields a more creative and innovative workplace that advances our business objectives. For this reason, we encourage, support, and celebrate the diverse voices of our employees, believing that all forms of diversity provide value at Glu. To attract the best talent, we promote a culture in which everyone feels accepted and valued as their authentic selves, starting at the top with our Board Diversity Policy. For example, we actively partner with organizations to drive inclusiveness of women in the gaming industry. When recruiting and hiring candidates, we consider all aspects of each candidate's qualifications and skills, with the goal of ensuring our organization has diversity of experience and perspectives, as well as diversity with respect to race, gender, ethnicity, and areas of expertise. We seek to retain our employees through competitive compensation and benefits package and our unique values-driven culture. We invest in our talent by providing our employees with training, mentoring, and career development opportunities. We believe that these initiatives enable us to hire and retain talented, high-performing employees.

Compliance and Ethics

Our culture of integrity and compliance starts with our Code of Business Conduct and Ethics (the “Code of Conduct”) and our compliance program, which includes risk assessment, development of policies and procedures, worldwide live annual trainings of our employees in our compliance program, and investigations and remediation of potential compliance matters. The Code of Conduct applies to all of our employees, including our executive officers, and our Board. Our Nominating and Governance Committee annually reviews our compliance policies, including our Code. Complaints or concerns regarding possible violations of the Code of Conduct or our policies may be made by phone, letter, email or web reporting using a third party confidential hotline. Reports may be made anonymously.

Community Involvement and Impact

We are committed to community involvement at a local and global level, as well as mobilizing our workforce to give back. We support community initiatives and actively encourage our employees to participate in volunteer days by providing full-time, non-contract employees with one day of paid leave annually to pursue group volunteer activities with registered 501c3 or 501c4 organizations. As part of that initiative, in 2019 we sponsored “Glu Gives” to clean up local beaches. We also made direct donations to charitable causes focused on the global well-being of people and our planet. In 2019, Glu made donations to SpecialEffect (a gaming initiative for individuals with physical disabilities), Extra Life (benefitting local Children’s Miracle Network Hospitals), and the Golden Gate Audubon Society. In addition, we have partnered with various organizations on in-game events and campaigns to drive awareness of charitable causes and have partnered with advertising networks to support initiatives focusing on environmental and social issues. For example, we recently joined the #PlayApartTogether campaign, actively encouraging players to follow guidance of the World Health Organization and local health authorities to help slow the spread of COVID-19.

DIRECTOR COMPENSATION

Overview

The Compensation Committee and the Nominating and Governance Committee with the help of its compensation consultant Radford, an Aon company (“Radford”), evaluate the appropriate level and form of compensation for non-employee directors on an annual basis relative to industry peers and recommend changes to the Board when appropriate. Our non-employee director compensation program is set forth below and was most recently amended in April 2019:

Cash Compensation

- Non-employee directors receive an annual cash retainer of \$40,000;
- The Lead Independent Director receives an additional annual cash retainer of \$25,000;
- The chair of the Audit Committee receives additional annual cash compensation of \$20,000;
- The chair of the Compensation Committee receives additional annual cash compensation of \$15,000;
- The chair of the Nominating and Governance Committee receives additional annual cash compensation of \$10,000;
- The chair of the Strategy Committee receives additional cash compensation of \$20,000; and
- Each non-employee director receives additional annual cash compensation of \$10,000 for service on the Audit Committee, \$7,500 for service on the Compensation Committee and \$5,000 for service on each of the Nominating and Governance Committee or Strategy Committee, other than as chair.

All cash compensation to directors is paid in arrears in quarterly installments. We also reimburse our directors for reasonable expenses in connection with attendance at Board and committee meetings.

Equity Compensation

Annual Equity Grants

In April 2019, our Board amended our non-employee director compensation program to provide that each year immediately following our annual meeting of stockholders, each non-employee director will receive the lesser in value of (1) stock options and RSUs having an aggregate grant date fair value of \$235,000, with the number of stock options and RSUs allocated to provide an equal value of each equity instrument, or (2) the aggregate grant date fair value of (a) an RSU covering 25,000 shares of our common stock and (b) a stock option to purchase 50,000 shares of our common stock. Both the stock option and RSU awards will vest on the earlier to occur of (a) the first anniversary of the grant date and (b) the date of our next annual meeting of stockholders that follows the grant date.

New Director Equity Grants

In April 2019, our Board amended our non-employee director compensation program to provide that each new non-employee director will receive the lesser in value of (1) stock options and RSUs having an aggregate grant date fair value of \$352,500, with the number of stock options and RSUs allocated to provide an equal value of each equity instrument, or (2) the aggregate grant date fair value of (a) an RSU covering 37,500 shares of our common stock and (b) a stock option to purchase 75,000 shares of our common stock. The RSU will vest as to 33⅓% of the total number of shares subject to the RSUs on the first anniversary of the grant date and thereafter vest in equal quarterly installments over the next two years following the first vesting date on the same day of each third month. The stock option will vest as to 33⅓% of the underlying shares on the first anniversary of the grant date and thereafter vest pro rata monthly over the next 24 months.

Other Equity Matters

Our 2007 Equity Incentive Plan, under which we grant equity awards to our non-employee directors, provides that such awards are subject to a compensation limit. Specifically, in any calendar year, no non-employee director may be granted any awards or awards denominated in shares that exceed in the aggregate \$600,000 in value plus an additional aggregate \$600,000 in value for one-time awards to a newly appointed or elected outside director. This limit does not apply to any award made pursuant to deferred compensation arrangements in lieu of all or a portion of cash retainers.

In addition, our 2007 Equity Incentive Plan provides that each of the equity awards held by our non-employee directors will accelerate in full immediately prior to a change in control of Glu.

Since Mr. Earl is an executive officer, and since the Voting Agreement provides that Tencent's designee to Glu's Board shall not receive any compensation for his or her Board service, we do not provide, and have not provided, Messrs. Earl or Feder any compensation for service on our Board or on the Strategy Committee. In November 2019, Mr. de Masi's role changed from Executive Chairman to Chairman of the Board. As an executive officer, Mr. de Masi did not receive any compensation for his services on the Board and on the Strategy Committee and only started being compensated for his services on the Board and Strategy Committee in November 2019.

Director Summary Compensation Table

The following table sets forth certain information with respect to compensation awarded to, earned by or paid to each person who served as a non-employee director during 2019.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards ⁽¹⁾⁽²⁾⁽³⁾ (\$)	Option Awards ⁽¹⁾⁽²⁾⁽³⁾ (\$)	Total (\$)
Darla Anderson ⁽⁴⁾	33,111	272,957 ⁽⁴⁾	90,539	396,607
Eric R. Ball	60,000	90,557	90,539	241,096
Greg Brandeau	57,500	90,557	90,539	238,596
Niccolo M. de Masi ⁽⁵⁾	7,337	—	—	7,337
Ben Feder ⁽⁶⁾	—	—	—	—
Ann Mather	45,000	90,557	90,539	226,096
Hany M. Nada	62,500	90,557	90,539	243,596
Benjamin T. Smith, IV ⁽⁷⁾	109,870	90,557	90,539	290,966
Gabrielle Toledano ⁽⁷⁾	52,630	90,557	90,539	233,726

- (1) Amounts shown in this column do not reflect dollar amounts actually received by the non-employee director. Instead, these amounts reflect the grant date fair value calculated in accordance with FASB ASC Topic 718 of each RSU award or stock option award, as applicable. See Note 12 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Annual Report on Form 10-K for the year ended December 31, 2019 for a description of the ASC Topic 718 methodology and assumptions.
- (2) On June 6, 2019, following our 2019 Annual Meeting of Stockholders, each of Ms. Anderson, Dr. Ball, Mr. Brandeau, Ms. Mather, Mr. Nada, Mr. Smith and Ms. Toledano received an option to purchase 28,780 shares of our common stock at an exercise price of \$7.05 per share and an RSU award for 12,845 shares.
- (3) The aggregate number of outstanding stock options and unvested RSU awards held by each of our non-employee directors as of December 31, 2019 was as follows:

Name	Stock Options	RSU Awards
Darla Anderson	28,780	32,845
Eric R. Ball	278,780	12,845
Greg Brandeau	238,780	12,845
Niccolo M. de Masi	—	—
Ben Feder	—	—
Ann Mather	153,780	12,845
Hany M. Nada	278,780	12,845
Benjamin T. Smith, IV	278,780	12,845
Gabrielle Toledano	138,780	12,845

- (4) Ms. Anderson joined our Board on March 4, 2019. Upon joining the Board, Ms. Anderson received 20,000 RSUs which vest as to 33⅓% of the total number of shares subject to the RSUs on the first anniversary of the grant date and thereafter vest in equal quarterly installments over the next two years following the first vesting date on the same day of each third month.
- (5) Mr. de Masi started being compensated for his services on the Board and Strategy Committee in November 2019 when his role changed from Executive Chairman to Chairman of the Board. The compensation reflected in the table does not include the compensation of \$324,519 that Mr. de Masi received as the Executive Chairman of Glu in 2019.
- (6) Mr. Feder does not receive compensation for service on our Board or on our Strategy Committee pursuant to the terms of the Voting Agreement we entered into with Tencent.
- (7) Ms. Toledano became Chair of the Compensation Committee on April 25, 2019. The former Chair of this committee, Mr. Smith, remains on the committee as a regular member.

Stock Ownership Guidelines

In April 2018, our Board adopted stock ownership guidelines for our non-employee directors in order to better align the long-term interests of our non-employee directors with our stockholders and to further promote a long-term perspective in overseeing our company; our Board amended these guidelines in January 2020. Under these stock ownership guidelines, as amended, each of our non-employee directors is required to hold at least five times his or her annual cash retainer, which is equal to \$200,000, of our common stock. In determining the value of a non-employee director's stock ownership, shares of our common stock as well as vested, in-the money, unexercised stock options are counted. Each non-employee director is required to comply with these stock ownership guidelines by April 1, 2023 or, if later, within five years from his or her election to our Board. Compliance with these stock ownership guidelines is measured on the last day of our fiscal year based on a non-employee director's year end holdings and our 30-day average stock price. If a non-employee director fails to comply with these stock ownership guidelines within the time frame specified above, such non-employee director will be expected to achieve compliance by retaining 100% of the shares acquired from his or her next RSU vest. As of December 31, 2019, each of our non-employee directors was in compliance with these guidelines, other than Ms. Anderson who joined our Board in March 2019 and has until March 2024 to achieve compliance and Mr. Feder who was appointed to the Board by a greater than 10% stockholder and does not receive any compensation for his services on the Board or on the Strategy Committee from us.

STOCKHOLDER MATTERS

Stockholder Communications with Directors

Stockholders may communicate with the Board by sending an email to bod@glu.com, or by sending written correspondence to: Board, c/o Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103. Communications are distributed to the Board, or to any individual directors as appropriate, depending on the facts and circumstances outlined in the communication. The Board has instructed the Corporate Secretary to review all correspondence and to determine, in his discretion, whether matters submitted are appropriate for Board consideration. In particular, the Board has directed that communications such as product or commercial inquiries or complaints, resume and other job inquiries, surveys and general business solicitations or advertisements should not be forwarded to the Board. In addition, material that is unduly hostile, threatening, illegal, patently offensive or similarly inappropriate or unsuitable will be excluded, with the provision that any communication that is filtered out must be made available to any non-management director upon request. The Corporate Secretary may forward certain communications to another person or department for review and possible response.

Stockholder Recommendations of Director Candidates

The Nominating and Governance Committee will consider nominees recommended by stockholders for election as directors. If a stockholder would like to recommend a director candidate for our 2021 Annual Meeting of Stockholders, the stockholder must deliver notice in writing to the Corporate Secretary, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103. Such notice must set forth the information required under our Bylaws to be included in the notice. A copy of our Bylaws, which we most recently amended on March 7, 2014, may be obtained from the SEC's website.

Stockholder Proposals for the 2021 Annual Meeting of Stockholders

Under SEC Rule 14a-8, any stockholder who intends to present a proposal for inclusion in our 2021 proxy statement and form of proxy must submit the proposal, in writing, so that the Corporate Secretary receives it at our principal executive offices by December 29, 2020. Any stockholder who wishes to bring a proposal or nominate a person for election to the Board at the 2021 Annual Meeting of Stockholders must provide written notice of the proposal or nomination to our Corporate Secretary, at our principal executive offices, between February 18, 2021 and March 20, 2021. In addition, our stockholders must comply with the other procedural requirements in our Bylaws, including that such stockholders must have continuously beneficially owned at least 1% of our outstanding common stock for a period of one year prior to the date of the submission of the proposal or nomination and continue to be a stockholder of record at the time of the annual meeting, entitled to vote at such meeting and otherwise comply with the requirements in our Bylaws. Any notice delivered by a stockholder in connection with a nomination or proposal must include, among other things, (a) a written consent to the public disclosure of information provided by such persons pursuant to our Bylaws; (b) a description of (i) any agreement with respect to the nomination or proposal between or among such stockholder and associated person(s) and any of their respective affiliates or associates, and (ii) as to each person whom such stockholder or associated person proposes to nominate for election or re-election as a director, a description of any agreement of such person with any other person or entity (other than Glu) with respect to any compensation, reimbursement or indemnification in connection with service or action as a director known to such stockholder or associated person; and (c) a representation that the stockholder has continuously beneficially owned at least 1% of our outstanding common stock for the one-year period before giving such notice, is entitled to vote at such meeting and intends to appear at the meeting to propose such business or nomination.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding ownership of our common stock as of April 20, 2020 by:

- Each Named Executive Officer (defined in “Compensation Discussion and Analysis” below);
- Each of our directors;
- All current executive officers and directors as a group; and
- All persons known to us to beneficially own 5% or more of our common stock.

We calculated the “Percent of Class” based on 151,592,087 shares of common stock outstanding on April 20, 2020. In accordance with SEC regulations, we also included shares subject to equity awards that are currently vested or will become vested by June 19, 2020 (i.e., within 60 days of April 20, 2020). We deem those shares outstanding and beneficially owned by the person holding the award for computing that person’s percentage ownership, but they are not treated as outstanding for computing any other person’s percentage ownership. Unless otherwise indicated, each person has sole voting and investment power with respect to the shares each person beneficially owns, and the address of each person is: c/o Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership	Percent of Class
5% Stockholders		
Red River Investment Limited ⁽¹⁾	21,000,000	13.85%
BlackRock Inc. ⁽²⁾	17,910,794	11.82%
Vanguard Group Inc. ⁽³⁾	11,486,348	7.58%
Named Executive Officers and Directors		
Nick Earl ⁽⁴⁾	4,361,623	2.88%
Eric R. Ludwig ⁽⁵⁾	2,300,508	1.52%
Chris Akhavan ⁽⁶⁾	881,188	*
Becky Ann Hughes ⁽⁷⁾	282,656	*
Scott Leichtner ⁽⁸⁾	1,032,916	*
Darla Anderson ⁽⁹⁾	49,957	*
Eric R. Ball ⁽¹⁰⁾	401,625	*
Greg Brandeau ⁽¹¹⁾	276,625	*
Niccolo M. de Masi	817,333	*
Ben Feder ⁽¹²⁾	—	—
Ann Mather ⁽¹³⁾	220,291	*
Hany M. Nada ⁽¹⁴⁾	456,825	*
Benjamin T. Smith, IV ⁽¹⁵⁾	276,625	*
Gabrielle Toledano ⁽¹⁶⁾	166,624	*
All directors and executive officers as a group (14 persons) ⁽¹⁷⁾	11,328,223	7.47%

*Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1) The information is based solely upon a Schedule 13D/A filed with the SEC on June 4, 2019 by Tencent Holdings Limited (“Tencent”), Red River Investment Limited, a wholly-owned subsidiary of Tencent (“Red River”), and THL E Limited, a wholly-owned subsidiary of Tencent (“THL”). Tencent and Red River have shared voting and dispositive power over 21,000,000 shares. THL does not beneficially own any outstanding shares of Glu. The principal address of Tencent is 29/F Three Pacific Place, No. 1 Queen’s Road East, Wanchai, Hong Kong. The principal address of each of Red River and THL is P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands. The individual officers and directors of each of Tencent, Red River and THL are listed on Appendix A to the Schedule 13D/A.

(2) The information is based solely upon a Schedule 13G/A filed with the SEC on February 4, 2020 by BlackRock, Inc. on its own behalf and on behalf of certain of its subsidiaries specified on Exhibit A to the Schedule 13G/A. BlackRock

Inc. has sole voting power over 17,622,583 shares and sole dispositive power over 17,910,794 shares. The address for BlackRock Inc. is 55 East 52nd Street, New York, New York 10055.

- (3) The information is based solely upon a Schedule 13G/A filed with the SEC on February 12, 2020 by Vanguard Group Inc. (“Vanguard”) on its own behalf and on behalf of its wholly-owned subsidiaries Vanguard Fiduciary Trust Company (“VFTC”) and Vanguard Investments Australia, Ltd. (“VIA”). Vanguard has sole voting power over 240,589 shares, shared voting power over 7,600 shares, sole dispositive power over 11,250,718 shares and shared dispositive power over 235,630 shares. VFTC is the beneficial owner of 228,030 shares and VIA is the beneficial owner of 20,159 shares. The address for Vanguard is 100 Vanguard Boulevard, Malvern, Pennsylvania 19355.
- (4) Includes 2,907,144 shares subject to options that are exercisable and 926,583 shares subject to PSOs that are exercisable within 60 days of April 20, 2020.
- (5) Includes (a) 187,693 shares held by The Ludwig McKillop Trust, of which Mr. Ludwig and his spouse, Mary Elizabeth McKillop, are the co-trustees, (b) 8,880 shares held by Mr. Ludwig’s minor children, (c) 1,106,533 shares subject to options that are exercisable, and (d) 940,402 shares subject to PSOs that are exercisable within 60 days of April 20, 2020.
- (6) Represents 252,342 shares subject to options that are exercisable and 628,846 shares subject to PSOs that are exercisable within 60 days of April 20, 2020.
- (7) Includes 102,776 shares subject to options that are exercisable, 129,932 shares subject to PSOs that are exercisable and 12,500 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (8) Includes 619,784 shares subject to options that are exercisable and 201,592 shares subject to PSOs that are exercisable within 60 days of April 20, 2020.
- (9) Includes 28,780 shares subject to options that are exercisable and 14,511 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (10) Includes 228,780 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (11) Includes 238,780 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (12) Mr. Feder was appointed to the Board by a greater than 10% stockholder and we do not provide him with any compensation for his services on the Board or on the Strategy Committee.
- (13) Includes 128,780 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (14) Includes 228,780 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (15) Includes 228,780 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (16) Includes 128,779 shares subject to options that are exercisable and 12,845 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.
- (17) Includes 6,200,038 shares subject to options that are exercisable, 2,827,355 shares subject to PSOs that are exercisable and 104,081 shares that will settle pursuant to RSU awards within 60 days of April 20, 2020.

COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis (“CD&A”) describes the philosophy, objectives and structure of our fiscal year 2019 executive compensation program. This CD&A is intended to be read in conjunction with the tables following this section which provide further historical compensation information for the executives identified below. We refer to these individuals collectively as our “Named Executive Officers.”

Name	Position
Nick Earl	President and Chief Executive Officer
Eric R. Ludwig	Executive Vice President, Chief Operating Officer and Chief Financial Officer
Chris Akhavan	Senior Vice President, Business & Corporate Development
Becky Ann Hughes	Senior Vice President, Revenue
Scott J. Leichtner	Vice President, General Counsel and Corporate Secretary

We also refer to Messrs. Earl, Ludwig and Akhavan and Ms. Hughes as our “Eligible Officers” to indicate that they were eligible to receive certain performance-based equity awards in lieu of performance-based cash incentive awards.

Executive Summary

Our executive compensation program is designed to align the interests of the Named Executive Officers and our other executives with our stockholders and to emphasize our pay-for-performance culture by rewarding our executives for strong company performance and financial results. Our executive compensation program is designed to focus and reward executives on performance which the Compensation Committee believes will drive the creation of sustainable long-term value for our stockholders, and our business results directly impact the compensation received by our executives.

2019 Business Highlights

Our corporate performance during 2019 was strong. Highlights of our performance include:

- **Revenues.** Our 2019 revenues were a company record of \$411.4 million, a 12% increase from the \$366.6 million in revenues we generated in 2018.
- **Bookings.** Our 2019 bookings were also a company record of \$423.3 million, a 10% increase from the \$384.6 million in bookings we generated in 2018. This was our third straight year of double-digit year-over-year bookings growth.
- **Growth Games.** Revenues from our three growth games, *Design Home*, *Covet Fashion* and our *Tap Sports Baseball* franchise were \$322.3 million in 2019, a 22% increase from the \$263.8 million in revenues that we generated from these titles in 2018. Bookings from our three growth games were \$333.4 million in 2019, a 16% increase from the \$286.3 million that we generated from these titles in 2018.
- **GAAP Profitability.** We generated GAAP net income of \$8.9 million, a major milestone for our company.

2019 Compensation Highlights

Because of our strong pay for performance culture, and our focus on incentivizing and achieving results which will drive sustainable long-term value creation for our stockholders, we set very high performance goals for our executive compensation program. Therefore, despite the fact that 2019 was a record year for us in terms of revenues, bookings, and profitability, we did not achieve the performance goals established by the Compensation Committee, resulting in no payouts under any of our 2019 performance-based programs for executives.

We took the following actions related to 2019 executive compensation:

- **Selective Increases to Base Salaries:** We did not increase base salaries for any of our named executive officers during 2019, other than for Becky Ann Hughes effective upon her promotion from Vice President, General Manager Glu Play to Senior Vice President, Revenue in December 2019.
- **No Annual Incentive Payouts:** We did not achieve the Adjusted EBITDA and bookings targets established by the Compensation Committee and, as a result, our Named Executive Officers did not receive annual incentive payouts for 2019 performance.
- **Long-term Incentive Program:**
 - **No vesting of the first tranche of 2018 performance awards:** We did not meet the Adjusted EBITDA threshold or the bookings goals that the Compensation Committee established in October 2018 for 2019 performance and therefore the first tranche of the performance awards issued in 2018 did not vest.
 - **Vesting at 77.7% of the second tranche of 2017 performance awards:** We met the Adjusted EBITDA threshold and generated bookings between target and maximum with respect to the targets that the Compensation Committee established in October 2017 for 2019 performance and therefore the second tranche of the performance awards issued in 2017 vested at 77.7%.

Components of Pay

Element	Performance Period	Objective	Performance Measured/Rewarded for 2019
Base Salary	Annual	Recognizes an individual's role and responsibilities and serves as an important retention vehicle	Reviewed annually and set based on market competitiveness, individual performance and internal equity considerations
Annual Incentive Opportunity	Annual	Motivates executives to achieve our annual financial plan and strategic goals. For our Eligible Officers, annual incentive opportunities are delivered in performance-based equity to further align annual performance achievements with the creation of sustainable long-term value for stockholders. Mr. Leichtner's annual incentive opportunity is in cash.	- Bookings - Adjusted EBITDA
Time-based RSUs	Long-Term	Supports the achievement of strong share price growth.	Vesting 25% on the first Glu quarterly vesting date following the first anniversary of grant, and 6.25% quarterly thereafter
PSUs	Long-Term	Aligns the interests of management and stockholders and serves an important retention vehicle	Adjusted EBITDA achievement and bookings thresholds over a three-year period

Target Pay Mix

To help retain and motivate our Named Executive Officers, our Compensation Committee aims to offer compensation competitive to our peers and industry through a mix of cash (base salaries and an annual performance-based bonus for Mr. Leichtner) and long-term incentives (annual performance-based equity awards for our Eligible Officers and long-term performance-based and time-based equity awards for all of our Named Executive Officers).

The Compensation Committee does not have any formal policies for allocating total compensation among the various components; instead, the committee uses its judgment, in consultation with Radford, to establish an appropriate balance of short-term and long-term compensation for each Named Executive Officer. The balance may change from year to year based on corporate strategy and objectives, among other considerations, but the majority of each executive's potential total compensation is based solely on the achievement of aggressive performance goals.

Governance of Our Pay Program

The Compensation Committee regularly reviews best practices in executive compensation and uses the following guidelines to design our compensation programs:

What We Do	✓ Pay-for-performance philosophy and culture ✓ Consider the views of our stockholders when designing our program ✓ Periodically engage with stockholders ✓ Majority of potential compensation is performance-based and not guaranteed ✓ Responsible use of shares under our long-term incentive program ✓ Compensation Committee comprised solely of independent directors ✓ Engage an independent compensation consultant ✓ Review compensation philosophy and strategy annually ✓ Clawbacks ✓ Annual say-on-pay vote ✓ Stock ownership guidelines for CEO and non-employee board members
What We Don't Do	- X No hedging of Glu stock - X No pledging of Glu stock without approval - X No change in control excise tax gross-ups - X No backdating or repricing of stock option awards - X No perquisites - X No special health or welfare benefits - X No pension or nonqualified deferred compensation

2019 Say on Pay Results and Consideration of Stockholder Support

At our 2019 Annual Meeting of Stockholders, we conducted a stockholder advisory vote, or say-on-pay vote, on the compensation of the Named Executive Officers. At that meeting, our stockholders approved the compensation of our

Named Executive Officers, as disclosed in our 2019 annual proxy statement, with approximately 95.92% of the votes cast in favor of the proposal.

Our Compensation Committee noted the support of our stockholders in the 2019 say-on-pay vote and considered this result in their decision-making regarding our executive compensation. Given that the 2019 say-on-pay vote reflected strong support for our compensation practices, and that we did not receive any stockholder feedback requiring compensation changes during 2019, we have maintained our existing focus on performance-based compensation. We value the opinions of our stockholders and will continue to consider the outcome of future say-on-pay votes, as one element in the process, when making compensation decisions for our executive officers.

Compensation Philosophy and Objectives

The Compensation Committee has established a compensation program for executive officers designed to

- Attract individuals with the skills necessary for us to achieve our performance objectives;
- Motivate and reward those individuals fairly over time; and
- Retain those individuals who continue to perform at or above the levels that we expect.

Our compensation program for executive officers is also designed to reinforce a sense of ownership, urgency, innovation and overall entrepreneurial spirit and to link rewards to measurable corporate and, where appropriate, individual performance.

We provide competitive pay opportunities. We reward the achievement of specific financial and strategic goals which we believe will drive the creation of sustainable long-term value for our stockholders. We use performance-based equity and multi-year goals to ensure that performance is sustained over a longer time horizon.

Process for Setting Executive Compensation

Role of the Compensation Committee

The Compensation Committee acts on behalf of the Board to oversee the compensation policies and practices applicable to all our employees, including the administration of our equity plans. Our Compensation Committee annually assesses the performance of our Chief Executive Officer, other executives and members of our senior leadership, and, based in part on the recommendations from our Chief Executive Officer (other than with respect to his own compensation), approves the compensation of these executives.

The Compensation Committee works within the framework of a pay-for-performance philosophy to determine each component of an executive officer's compensation package based on numerous factors, including:

- the individual's particular background and circumstances, including training and prior relevant work experience;
- the individual's role with us and the compensation paid to similar persons in the companies represented in the compensation data that the Compensation Committee reviews;
- the demand for personnel with the individual's specific expertise and experience at the time of hire or review;
- performance goals and other expectations for the position, where appropriate;
- comparison to other executives within our company having similar levels of expertise and experience; and
- compensation data of peer companies for similar positions.

The Compensation Committee performs a strategic review of our executive officers' compensation levels to determine whether they provide adequate incentives and motivation and whether they are appropriately aligned with the competitive talent market. Historically, in making compensation decisions, the Compensation Committee has given significant weight to, among other things, our financial performance relative to our operating plan approved by the Board.

Role of the Compensation Consultant

The Compensation Committee's charter provides that the committee has the authority to retain experts and advisors of its choice to assist the committee in performing its functions. In 2019, the Compensation Committee relied upon the advice and expertise of Radford. The Compensation Committee selected Radford based on its expertise in executive compensation, particularly with respect to compensation practices of technology companies in the San Francisco Bay Area. Radford provided the following services to the committee in 2019:

- reviewed and provided recommendations regarding the composition of our peer group, and provided compensation data relating to executives at the selected peer group companies;
- conducted a comprehensive review of the total compensation arrangements for our Named Executive Officers and other members of senior leadership and provided advice on our compensation of these individuals;
- conducted a comprehensive review of compensation paid to the members of our Board and its committees, and provided advice on our director compensation program;
- provided research and recommendations relating to the short- and long-term incentive plans applicable to our Named Executive Officers, other executive officers and members of our senior leadership;
- assisted the Compensation Committee in a comprehensive review of our equity strategy, our request for stockholder approval of an increase to the aggregate number of shares of common stock authorized for issuances under our 2007 Equity Incentive Plan and related stockholder outreach;
- updated the Compensation Committee on emerging trends/best practices in the area of executive and Board compensation;
- participated in Compensation Committee meetings, as requested, and provided ad hoc advice and support;
- assisted with our disclosure in this Compensation Discussion and Analysis; and
- assisted with Proposal No. 2 below, which is the proposal to amend our 2007 Equity Incentive Plan, to, among other things, increase the aggregate number of shares of common stock authorized for issuances under the plan by 7,000,000 shares.

In selecting Radford, the Compensation Committee reviewed Radford's independence as required under SEC and Nasdaq rules. Based on this assessment, the Compensation Committee does not believe the retention of, and the work performed by, Radford creates any conflict of interest.

Role of Executive Officers in Compensation Decisions

To aid the Compensation Committee in its responsibilities, Messrs. Earl and Ludwig provide the Compensation Committee with recommendations relating to the performance and achievements for each of the Named Executive Officers. The committee typically evaluates, discusses and modifies or approves these recommendations. The Compensation Committee does not consult with any other executive officer with regard to its decisions. No executive officer is involved in the deliberations or decisions regarding his or her own pay.

Use of Competitive Market Data

When considering executive compensation decisions, the Compensation Committee believes it is important to be informed as to current compensation practices of comparable publicly held companies, especially to understand the demand and competitiveness for attracting and retaining an individual with each Named Executive Officer's specific expertise and experience

Radford has historically provided the Compensation Committee competitive market data using the most recently approved peer group as well as with information from select cuts of the Radford Global Technology Survey. Data from the Radford survey was filtered to reflect companies having similar industry and financial profiles as the companies

included in our peer group. The committee uses the data as a reference point when making pay determinations, but does not benchmark pay to a specific level or percentile of the market.

Our executive compensation is typically established annually during the fourth quarter of each fiscal year. Compensation decisions on annual and long-term equity incentives for our executives, including the magnitude of equity awards and the levels of cash compensation for the upcoming fiscal year, have historically been finalized at an October meeting of the Compensation Committee. As described in more detail below, compensation data from a peer group established and approved in September 2018 was relied upon by the Compensation Committee to finalize cash compensation for the 2019 fiscal year, while the peer group identified in July 2019 and the related competitive assessment was relied upon by the Compensation Committee to finalize the executive equity awards granted in December 2019.

In addition to reviewing the market data contained in the Radford's reports, the Compensation Committee also considered a number of additional factors in making executive compensation decisions, including our overall performance, each executive officer's individual performance, the scope of responsibility of each executive officer, and the then-current compensation and equity holdings of each executive officer.

Determination of 2018 Peer Group

In September 2018, the Compensation Committee, with input from Radford, reviewed the peer group that was used in 2017 and approved changes to better reflect our then-current market capitalization and revenues. The peer group selection criteria for purposes of determining our 2018 peer group, which was used in guiding compensation decisions made in October 2018 for fiscal 2019, targeted companies with the following characteristics:

- in the gaming as well as internet and application software and services sectors;
- headquartered in the San Francisco Bay Area, as well as other high technology centers;
- annual revenue between approximately \$155 million and \$800 million (Glu's revenue for the prior four quarters at the time the peer group was determined was approximately \$333 million); and
- market capitalization of between approximately \$300 million and \$3.6 billion (Glu's market capitalization at the time the peer group was determined was approximately \$894 million).

Based on the criteria above, the Compensation Committee approved the below peer companies in September 2018, which were used in guiding compensation decisions made in October 2018. Compared to the 2017 peer group, BazaarVoice and Silver Spring Networks were excluded due to acquisition and Telenav because it no longer fit the revenue or market capitalization criteria. Zynga fell outside of the target revenue range, but the committee believed it was appropriate to include Zynga in the group of peer companies due to it being the most similar company to Glu in terms of it being a developer and publisher of mobile games located in San Francisco and thus a primary competitor for executive talent. Companies listed in bold were also included in the 2017 peer group.

- | | | | |
|-----------------------|---------------------------|------------------------|-----------------------|
| • A10 Networks | • Lending Tree | • PROS Holdings | • Rapid7 |
| • Blucora | • LivePerson | • QAD | • Shutterstock |
| • Carbonite | • MobileIron | • QuinStreet | • TrueCar |
| • Care.com | • Monotype Imaging | • Quotient Technology | • XO Group |
| | | | • Zynga |

Determination of 2019 Peer Group

In July 2019, the Compensation Committee, with input from Radford, reviewed the peer group that was used during the first half of 2019 and approved changes to better reflect our then-current market capitalization and revenues. The peer group selection criteria for purposes of determining our 2019 peer group, which was used in guiding compensation decisions made in December 2019 for fiscal 2020, targeted companies with the following characteristics:

- in the gaming as well as internet and application software and services sectors;
- headquartered in the San Francisco Bay Area, as well as other high technology centers;

- annual revenue between approximately \$200 million and \$1.2 billion (Glu's revenue for the prior four quarters at the time the peer group was determined was approximately \$381 million); and
- market capitalization of between approximately \$400 million and \$4 billion (Glu's trailing six-month average market capitalization at the time the peer group was determined was approximately \$1.3 billion).

Based on the criteria above, the Compensation Committee approved the below peer companies in July 2019, which were used in guiding compensation decisions made in December 2019. Compared to the 2018 peer group, XO Group was excluded due to the company having been acquired and Box, Chegg and Eventbrite were added because they fit the peer group selection criteria. As in 2018, Zynga fell outside of the target revenue range, but the committee believed it was appropriate to include Zynga in the group of peer companies for the same reasons noted above. In addition, the committee elected to retain in the peer group Care.com, Lending Tree and MobileIron even though they did not meet one of the criteria (Care.com and MobileIron were slightly below the revenue range and Lending Tree was slightly above the market capitalization range) in order to maintain year-over-year consistency. Companies listed in bold were included in the 2018 peer group.

- | | | | |
|-----------------------|-----------------------|---------------------------|------------------------------|
| • A10 Networks | • Chegg | • Monotype Imaging | • Quotient Technology |
| • Blucora | • Eventbrite | • Holdings | • Rapid7 |
| • Box | • Lending Tree | • PROS Holdings | • Shutterstock |
| • Carbonite | • LivePerson | • QAD | • TrueCar |
| • Care.com | • MobileIron | • QuinStreet | • Zynga |

2019 Elements of Compensation

Base Salary

Base salaries provide fixed compensation to executive officers for performing their ongoing responsibilities. The Compensation Committee generally fixes executive officer base salaries at levels it believes will enable us to hire and retain individuals in a competitive environment and to reward individual performance and a level of contribution that is in-line with and in furtherance of our overall business goals.

The Compensation Committee reviews executive salaries annually, typically in the fourth quarter, and adjusts them as appropriate. Such adjustments are based on factors that may include promotions, the assumption of increased responsibilities or to address competitive pressure or retention issues, should they arise.

The table below sets forth the annual base salaries for each of the Named Executive Officers as of December 31, 2018 and 2019.

Component	2018 Salary (\$)	2019 Salary (\$)	% Increase
Nick Earl	475,000	475,000	0%
Eric R. Ludwig	375,000	375,000	0%
Chris Akhavan	400,000	400,000	0%
Becky Ann Hughes	300,000	360,000 ⁽¹⁾	20%
Scott J. Leichtner	345,000	345,000	0%

(1) On December 17, 2019, Ms. Hughes was promoted from Vice President and General Manager of Glu Play to Senior Vice President, Revenue. The increase in her salary reflects the additional responsibilities that she assumed and is effective on that date.

Annual Incentives Opportunity for 2019: PSOs for Messrs. Earl, Ludwig and Akhavan, Cash for Mr. Leichtner and a Mix of PSUs and Cash for Ms. Hughes

Consistent with the prior year, the Compensation Committee determined that for 2019 it would not provide Messrs. Earl, Ludwig and Akhavan with a cash-based annual bonus plan, but instead would provide them with the opportunity to earn an equivalent value of PSOs (the “2019 Annual PSOs”) to the extent that Glu achieved certain bookings and Adjusted EBITDA (defined as non-GAAP operating income excluding depreciation and royalty impairments) targets during 2019 (the “2019 Targets”). In addition, the committee elected to award Ms. Hughes PSUs that were also based on the 2019 Targets in lieu of 50% of her bonus opportunity; Ms. Hughes participated in a cash bonus plan with respect to the remaining 50% of her bonus opportunity as discussed below. At the time the Compensation Committee made its determination, Ms. Hughes was Vice President and General Manager of our Glu Play game development studio and not yet an executive officer. Due to constraints on the number of shares available for issuance under our 2007 Equity Incentive Plan, the committee decided that Ms. Hughes, together with our other creative leaders and certain other members of Glu’s leadership team, would receive 50% of their bonus in PSUs rather than PSOs and the remainder in cash.

The 2019 Annual PSOs and Ms. Hughes’ PSUs were issued in October 2018 and, to the extent earned based on fiscal 2019 performance, would have vested in February 2020, which aligned with the payment date for cash bonuses to our other employees.

For 2019, the Compensation Committee selected bookings and Adjusted EBITDA as the performance metrics for the annual incentive program because it believed that these measures would best reflect whether we had achieved financial performance that would lead to company success. The committee believed that significantly increasing bookings from the prior year would be the best way to increase stockholder value, but that we needed to achieve that growth while generating meaningful positive Adjusted EBITDA for the year.

Consistent with prior years, the committee decided to use bookings rather than revenue because GAAP accounting rules require that we recognize our in-app purchase revenue over four to eight months, depending on the game, and defer such amounts into future periods, and the committee believed that bookings would be a better indicator of our success during 2019. The committee decided to use Adjusted EBITDA, rather than GAAP profit/(loss), because GAAP accounting rules require that we take into account non-cash expenses, such as stock-based compensation, and certain other expenses that are not reflective of Glu’s core business and operating results during 2019.

The committee determined the maximum number of 2019 Annual PSOs or PSUs, as applicable, that each Eligible Officer could potentially earn by calculating the maximum cash bonus that each of the Eligible Officers could have otherwise received in 2019 (50% of the maximum with respect to Ms. Hughes), based on the historical maximum bonus percentages and annual base salaries for each of the Eligible Officers, and then converting such maximum bonus value into a maximum number of 2019 Annual PSOs or PSUs, as applicable, using a conversion ratio that took into account Glu’s stock price on the date the Compensation Committee approved the 2019 Annual PSOs and PSUs and, in the case of the 2019 Annual PSOs, the Black-Scholes value of the 2019 Annual PSOs. See the table below for more information regarding these grants.

Named Executive Officer	Target Bonus Percentage	Maximum Bonus Percentage	Base Salary for Determining # of 2019 Annual PSOs/PSUs	2019 Target Bonus Value	2019 Maximum Bonus Value	Target Bonus Value Converted into 2019 Annual PSOs/PSUs(1)	Maximum Bonus Value Converted into 2019 Annual PSOs/PSUs(1)	Actual Earned 2019 Annual PSOs/PSUs(1)
Nick Earl	100%	200%	\$475,000	\$475,000	\$950,000	150,709	301,418	0
Eric Ludwig	100%	200%	\$375,000	\$375,000	\$750,000	118,981	237,962	0
Chris Akhavan	100%	200%	\$400,000	\$400,000	\$800,000	126,913	253,826	0
Becky Ann Hughes	75%	150%	\$300,000	\$225,000	\$450,000 ⁽²⁾	16,705	33,410	0

- (1) Messrs. Earl, Ludwig and Akhavan received their annual incentive opportunity in form of PSOs awards and Ms. Hughes in form of PSU awards.
- (2) 50% of Ms. Hughes’ 2019 Maximum Bonus Value was converted into PSUs.

Given constraints in the number of shares available for issuance under Glu's 2007 Equity Incentive Plan, the Compensation Committee decided that Mr. Leichtner, together with Glu's other corporate vice presidents, would not receive a 2019 Annual PSO or a PSU but would instead be eligible for a cash-based bonus for 2019 performance, which bonus would be determined based on the achievement of the same 2019 Targets. In addition, as discussed above, Ms. Hughes participated in a similar cash bonus plan with respect to the remaining 50% of her bonus opportunity.

Named Executive Officer	2019 Target Bonus Percentage	2019 Maximum Bonus Percentage	2019 Target Cash Bonus	2019 Maximum Cash Bonus	2019 Actual Earned Cash Bonus
Becky Ann Hughes	75%	150%	\$225,000	\$225,000 ⁽¹⁾	\$0
Scott Leichtner	50%	100%	\$172,500	\$345,000	\$0

- (1) Ms. Hughes' maximum bonus opportunity was \$450,000, of which \$225,000 was in cash and 50% was converted into PSUs.

The Compensation Committee, at its October 25, 2018 meeting, established the following bookings-based 2019 Targets, provided that we generated at least a minimum Adjusted EBITDA threshold of \$60 million:

Performance Metric	Threshold (MMs)	Target (MMs)	Maximum (MMs)
Bookings	\$426	\$444	\$462

Each of these bookings targets represented a significant increase over our 2018 bookings results of \$384.6 million and the Adjusted EBITDA threshold of \$60 million reflected a significant increase from our 2018 Adjusted EBITDA of \$42 million. In 2019, we did not meet the Adjusted EBITDA threshold or the bookings threshold, as we generated \$42 million of Adjusted EBITDA and \$423 million of bookings. As a result, no 2019 Named Executive Officer received any annual incentive-based compensation for 2019 performance. As a result, all 2019 Annual PSOs and Ms. Hughes' PSUs were forfeited and neither Mr. Leichtner nor Ms. Hughes received a cash bonus.

Annual Incentives Opportunity for 2020: PSUs for the Eligible Officers and Cash for Mr. Leichtner

Consistent with the prior years, the Compensation Committee determined that for 2020 it would not provide the Eligible Officers with a cash-based bonus plan, but instead would provide them with the opportunity to earn an equivalent value of performance-based equity, in this case PSUs (the "2020 Annual PSUs"), to the extent that Glu achieves certain bookings and Adjusted EBITDA (again defined as non-GAAP operating income excluding depreciation/amortization and royalty impairments) targets during 2020 (the "2020 Targets"). The committee selected PSUs instead of PSOs to better align with market practice and to conserve shares in our equity plan. Additionally, the committee determined that it was the performance goals of the program, rather than the vehicle used to deliver the award, which served as the primary factor when considering whether or not the awards created a strong incentive to achieve objectives aligned with driving sustainable long-term value.

The Compensation Committee determined the maximum number of 2020 Annual PSUs that the Eligible Officers can potentially earn by calculating the maximum cash bonus that each of these Eligible Officers could have otherwise received in 2020, based on the historical maximum bonus percentages and annual base salaries for each Eligible Officer and then converting such maximum bonus value into a maximum number of 2020 Annual PSUs using a conversion ratio that took into account both Glu's 90 day average stock price from September 14, 2019 to December 13, 2019, as illustrated in the table below.

Named Executive Officer	2020 Threshold Bonus Percentage	2020 Target Bonus Percentage	2020 Maximum Bonus Percentage	Base Salary for Determining # of 2020 Annual PSUs	2020 Target Bonus Value	2020 Maximum Bonus Value	Target Bonus Value Converted into 2020 Annual PSUs	Maximum Bonus Value Converted into 2020 Annual PSUs
Nick Earl	30%	100%	200%	\$475,000	\$475,000	\$950,000	85,500	171,000
Eric Ludwig	30%	100%	200%	\$375,000	\$375,000	\$750,000	67,500	135,000
Chris Akhavan	24.3%	81% ⁽¹⁾	162% ⁽¹⁾	\$400,000	\$324,000	\$648,000 ⁽¹⁾	58,500	117,000
Becky Ann Hughes	27%	90% ⁽¹⁾	180% ⁽¹⁾	\$360,000	\$324,000	\$648,000	58,500	117,000

- (1) In December 2019, we restructured our Revenue team, with Mr. Akhavan moving from Chief Revenue Officer to Senior Vice President, Business & Corporate Development and Ms. Hughes assuming oversight of the Revenue team as Senior Vice President, Revenue. In connection with Ms. Hughes' promotion, the Compensation Committee increased Ms. Hughes' target and maximum bonus percentages from 75% and 150% to 90% and 180%, respectively. The committee, however, did not increase her bonus percentages to the 100% and 200% levels that Mr. Akhavan had received as Chief Revenue Officer due to the fact that Ms. Hughes was new in the role and because she did not assume all of Mr. Akhavan's previous duties since our Advertising team remained under Mr. Akhavan's supervision. The committee determined to reduce Mr. Akhavan's target and maximum bonus percentages from 100% and 200% to 81% and 162%, respectively, which had the impact of reducing his maximum bonus value by \$152,000 from \$800,000 to \$648,000. The committee reallocated this amount by increasing the value of Mr. Akhavan's annual refresh grants by \$152,000, as discussed below. The committee determined to reduce Mr. Akhavan's maximum bonus value to match that of Ms. Hughes given his new role and the reduction of his organization, with the opportunity to recoup the decrease via a larger long-term incentive grant if he excelled in this new position.

Given constraints in the number of shares available for issuance under Glu's 2007 Equity Incentive Plan, the Compensation Committee again decided that Mr. Leichtner, together with Glu's other corporate vice presidents, would not receive 2020 Annual PSUs but would instead be eligible for a cash-based bonus for 2020 performance, which bonus would be determined based on the achievement of the same 2020 Targets.

Named Executive Officer	2020 Threshold Bonus Percentage	2020 Target Bonus Percentage	2020 Maximum Bonus Percentage	2020 Target Cash Bonus	2020 Maximum Cash Bonus
Scott Leichtner	15%	50%	100%	\$172,500	\$345,000

The Eligible Officers will only earn the maximum amount of 2020 Annual PSUs, and Mr. Leichtner will only earn the maximum cash bonus, if Glu both (1) achieves a minimum Adjusted EBITDA threshold for 2020 (the "Adjusted EBITDA Threshold") and (2) generates bookings for 2020 that equal or exceed a specified maximum level of performance (the "Maximum Bookings Goal"). If Glu does not achieve the Maximum Bookings Goal, the Eligible Officers can earn (1) 15% of the maximum amount of 2020 Annual PSUs or, for Mr. Leichtner, 15% of the maximum bonus, if Glu achieves the Adjusted EBITDA Threshold in 2020 and generates 2020 bookings that are approximately 12% below the Maximum Bookings Goal (the "Minimum Bookings Goal") and (2) 50% of the maximum amount of 2020 Annual PSUs or, for Mr. Leichtner, 50% of the maximum bonus, if Glu achieves the Adjusted EBITDA Threshold in 2020 and generates 2020 bookings that are approximately 4% below the Maximum Bookings Goal (the "Target Bookings Goal"). If Glu does not achieve the Adjusted EBITDA Threshold or the Minimum Bookings Goal, no 2020 Annual PSUs or, for Mr. Leichtner, no cash bonus will be earned. To the extent that Glu achieves the Adjusted EBITDA Threshold in 2020 and generates bookings between the Minimum Bookings Goal and the Maximum Bookings Goal, the number of 2020 Annual PSUs earned or, for Mr. Leichtner, the amount of the cash bonus, will be calculated on a linear basis. Each of the Maximum Bookings Goal and the Target Bookings Goal represents a significant increase over our 2019 actual bookings.

The table below illustrates the number of 2020 Annual PSUs that each of the Eligible Officers could potentially earn based on Glu's Adjusted EBITDA and bookings for 2020:

Named Executive Officer	2020 Annual PSUs Earned if Glu Achieves Adjusted EBITDA Threshold and Maximum Bookings Goal	2020 Annual PSUs Earned if Glu Achieves Adjusted EBITDA Threshold and Target Bookings Goal	2020 Annual PSUs Earned if Glu Achieves Adjusted EBITDA Threshold and Minimum Bookings Goal	2020 Annual PSUs Earned if Glu Fails to Achieve Adjusted EBITDA Threshold or Minimum Bookings Goal
Nick Earl	171,000	85,500	25,650	0
Eric Ludwig	135,000	67,500	20,250	0
Chris Akhavan	117,000	58,500	17,550	0
Becky Ann Hughes	117,000	58,500	17,550	0

The 2020 Annual PSUs were granted on December 17, 2019. Glu will determine its 2020 Adjusted EBITDA and 2020 bookings in early 2021, and to the extent that the Eligible Officers earn any 2020 Annual PSUs, or Mr. Leichtner earns any cash bonus, based on Glu's 2020 bookings and 2020 Adjusted EBITDA, such 2020 Annual PSUs will fully vest, and for Mr. Leichtner, such cash bonus will be paid, in February 2021 (consistent with the timing of when Glu historically paid cash bonuses to executive officers).

Long-Term Incentives

Philosophy Regarding Equity Grants

We use equity awards to reward long-term performance, with strong corporate performance and extended executive officer tenure producing potentially significant value for each executive officer.

In December 2019, to emphasize our pay-for-performance culture, more conservatively manage our equity burn utilization rate, and better align with market practice, the Compensation Committee revised our equity grant program for our Named Executive Officers as follows:

- (1) 50% PSUs with multi-year performance vesting goals tied to our Adjusted EBITDA and bookings for our Eligible Officers; and 25% PSUs with multi-year performance vesting goals tied to our Adjusted EBITDA and bookings for Mr. Leichtner; and
- (2) 50% time-based RSUs with a four-year vesting for our Eligible Officers; and 75% time-based RSUs with a four-year vesting for Mr. Leichtner.

The Compensation Committee selected Adjusted EBITDA and bookings as the appropriate metrics given the importance of these factors on driving sustainable long-term stockholder value creation. The committee believes that Glu's executive compensation program aligns the interests of our executive officers with Glu's stockholders and is consistent with Glu's strategic goals of realizing significant bookings and Adjusted EBITDA growth in 2020 and beyond.

The size of executive equity awards is generally set at a level that the Compensation Committee deems appropriate to create a meaningful opportunity for significant compensation if we achieve the applicable performance goals and our stock price appreciates. The amounts are also based upon market data presented by the applicable Compensation Committee Consultant, the individual's position with us and the individual's potential for future responsibility and promotion. The relative weight given to each of these factors varies from individual to individual at the committee's discretion.

2019 Long-Term Equity Grants

In December 2019, the Compensation Committee determined the value of each Named Executive Officer's annual long-term equity awards by considering market data provided by Radford (including the compensation of similarly situated executives at Glu's peer companies), past performance and future potential performance of each executive, as well as each Named Executive Officer's current equity holdings.

The Compensation Committee determined to award 66.67% of the value of each of Messrs. Earl's, Ludwig's and Akhavan's annual equity award in PSUs and 33.3% of the value of Mr. Leichtner's annual equity award in PSUs; these Executive Officers received the balance of their annual refresh equity awards in the form of time vesting RSUs. The table

below sets forth for each Named Executive Officer the value of his or her annual refresh equity awards and the number of PSU and time vesting RSUs received:

Executive	Equity Value (\$)	RSUs (#)	Maximum PSUs (#) if Maximum Bookings Goal is met
Nick Earl	4,100,000	369,099	553,649
Eric Ludwig	2,300,000	207,056	310,584
Chris Akhavan	902,000	81,202	121,803
Becky Ann Hughes	925,000	83,272	124,908
Scott Leichtner	550,000	74,270	37,136

Each PSU is earned based upon achievement of rigorous multi-year (2020, 2021 and 2022) bookings and Adjusted EBITDA performance targets that are aligned with the long-term strategy approved by the Board, with one-third of the maximum shares subject to the PSUs earnable in each of those years. Executives are able to earn between 20% and 100% of the maximum PSUs specified in the table above depending upon performance.

Each Named Executive Officer will earn the maximum amount of PSUs for a given year if Glu

- Achieves the Adjusted EBITDA threshold for the respective year; and
- Generates bookings for such year that equal or exceed the Maximum Bookings Goal for such year.

The Adjusted EBITDA and the Maximum Bookings Goals increase in each year of the three-year performance period. Each of the Maximum Bookings Goal and Target Bookings Goal for 2020 represents a significant increase over our 2019 bookings, with the thresholds and goals for 2021 and 2022 increasing approximately 20% from the prior year's thresholds.

Performance Metric	Adjusted EBITA threshold achieved?	Payout as % of Maximum for Bookings Performance			
		Below Threshold	Threshold	Target	Maximum
Bookings	Yes	0%	20%	66.67%	100%
Bookings	No	0%	0%	0%	0%

To the extent that Glu achieves the Adjusted EBITDA threshold for a given year and generates bookings between two of the goals, the number of PSUs earned by the Named Executive Officer for such year will be calculated on a linear basis.

If Glu does not achieve an Adjusted EBITDA threshold or bookings goals in any year, and less than the full amount of shares are earned for such year, the Eligible Officer cannot recapture those shares through overachievement of the maximum Adjusted EBITDA thresholds and bookings goals in subsequent years.

The table below illustrates the number of PSUs that each Named Executive Officers could potentially earn based on Glu's Adjusted EBITDA and bookings for 2020, 2021 and 2022:

Named Executive Officer	Threshold PSUs Earnable	Target PSUs Earnable	Maximum Total PSUs Earnable	Target PSUs Eligible to be Earned for Performance During:		
				FY20	FY21	FY22
Nick Earl	110,730	369,099	553,649	123,033	123,033	123,033
Eric Ludwig	62,117	207,056	310,584	69,018	69,019	69,019
Chris Akhavan	24,361	81,202	121,803	27,067	27,067	27,068
Becky Ann Hughes	24,982	83,272	124,908	27,757	27,757	27,758
Scott Leichter	7,427	24,757	37,136	8,252	8,252	8,253

Each of the PSUs and time vesting RSUs were granted on December 17, 2019. Glu will determine its EBITDA and bookings for each of 2020, 2021 and 2022 early in 2021, 2022 and 2023, respectively, and to the extent that the Named Executive Officers earn any PSUs based on Glu's bookings and EBITDA for such years, the shares earned will fully vest in February 2021, 2022 and 2023, respectively. The time vesting RSUs vest over four years, with 25% of the total number of shares subject to the RSUs vesting on December 17, 2020, with 4.166% of the underlying shares vesting on February 15, 2021, an additional 6.25% of the underlying shares vesting in each of the following 11 quarters on the same day of each third month, and with the final 2.0833% of the underlying shares vesting on February 15, 2024; provided, however, that if any portion of the RSU vests on a date that is a non-trading day on The Nasdaq Stock Market, then the RSU will vest on the next trading day.

The committee believed that the annual refresh awards to the Named Executive Officers were merited based on the past successes of these executives and that these awards will help to ensure that these executives are properly incented to remain with us and focus on achieving our long-term strategic goals and creating stockholder value. The committee determined that the size and mix of their equity awards appropriately balanced both retention and motivational objectives of executive pay.

Achievement of Prior Long-Term Equity Grants

In October 2017 and 2018, we made awards of PSOs and PSUs to our executives which are earned based on the achievement of Adjusted EBITDA and bookings performance targets over three years, including 2019. The table below specifies the performance targets for the 2017 and 2018 PSOs and PSUs and the degree to which we achieved these performance targets based on 2019 performance:

Award	% of Tranche Earned for 2019 Performance	Performance Metrics			
		Adjusted EBITDA Threshold	Threshold Bookings	Target Bookings	Maximum Bookings
2017 PSOs and PSUs	77.7%	\$40M	\$390M	\$415M	\$440M
2018 PSOs and PSUs	0%	\$60M	\$426M	\$444M	\$462M

In 2020, the third tranche of the 2017 and the second tranche of the 2018 long-term incentive equity grants require achievement of significant bookings and Adjusted EBITDA growth to be earned.

Additional Compensation Plans and Policies

Severance and Change of Control Payments

Messrs. Earl, Ludwig, Akhavan and Leichtner each have an agreement with us that provides for payments and benefits if the individual is terminated under certain circumstances within 12 months following a change of control of Glu (a “double trigger” termination). In addition, Mr. Earl’s employment agreement provides for payments and benefits if he is terminated under certain circumstances in the absence of our change of control. For a description of these agreements and quantification of these severance and change of control benefits, please see the discussion under “*Payments Upon Termination or Change in Control*” below. Other than as set forth in these agreements, no executive officer is entitled upon termination to either equity vesting acceleration or cash severance payments.

The Compensation Committee decided to provide these arrangements to mitigate some of the risk that exists for executives working in a small public company, an environment where there is a meaningful likelihood that we may be acquired. These arrangements are also intended to mitigate a potential disincentive for executives to consider and execute on an acquisition where the acquirer may not require the services of these executives following the acquisition.

Other Benefits

Executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, disability, and accidental death and dismemberment insurance and our employee stock purchase plan and 401(k) plan, in each case on the same basis as other employees. There were no special benefits or perquisites provided to any Named Executive Officer in 2019.

Clawback Policy (Recovery of Incentive Compensation Policy)

Since 2017, we have maintained an executive compensation recovery policy that permits us to seek recovery of some or all of incentive compensation paid or awarded to executive officers, our Vice President of Accounting and our corporate controller in the event of the restatement by Glu of any financial results required to be reported under the U.S. federal securities laws after January 1, 2018 because one or more executive officers, our Vice President of Accounting and/or our corporate controller engaged in fraud or intentional misconduct. In such cases, the Compensation Committee may review all incentive-based cash compensation and equity compensation paid, granted or for which our executive officers, our Vice President of Accounting and our corporate controller are eligible on or after January 1, 2018 (“*Incentive Compensation*”) on the basis of having met or exceeded performance goals during the period covered by the restatement and will, to the extent practicable and in the best interests of stockholders, instruct Glu to seek to recover or cancel such Incentive Compensation from our executive officers, our Vice President of Accounting and our corporate controller to the extent that performance goals would not have been met under such restated financial result. In addition, as a public company subject to the provisions of Section 304 of the Sarbanes-Oxley Act of 2002, if we are required as a result of misconduct to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws, our Chief Executive Officer and Chief Financial Officer may be legally required to reimburse us for any bonus or other incentive-based or equity-based compensation they receive.

Chief Executive Officer Stock Ownership Guidelines

In January 2020, our Board adopted stock ownership guidelines for our Chief Executive Officer in order to better align the long-term interests of our Chief Executive Officer with our stockholders. Under these stock ownership guidelines, our Chief Executive Officer is required to hold at least five times his annual cash salary in our common stock. In determining the value of his stock ownership, shares and vested, in-the money unexercised stock options are counted. Mr. Earl is required to comply with these stock ownership guidelines by January 30, 2025. Compliance with these stock ownership guidelines is measured once per year based on Mr. Earl’s year-end holdings and our 30-day average stock price. As of January 30, 2020, Mr. Earl was in compliance with these guidelines.

Equity Granting Policy

Equity awards are typically either granted at regularly scheduled Stock Option Administration Committee meetings or via unanimous written consent, with the effective date of such grant being the second Tuesday of each month. The primary exceptions are for new hire or promotion equity grants that require Compensation Committee approval, which grants are generally approved on the second Tuesday of each month following the date the individual is hired or promoted, or for new hire awards made to individuals in connection with an acquisition. The Stock Option Administration Committee does not have discretion to set other grant dates for awards made pursuant to its delegated authority. Our annual equity awards for our executive officers are generally made at the Compensation Committee meeting held during our fourth quarter, at which the Compensation Committee reviews executive compensation for the upcoming year.

Other than as described in the section of this proxy statement titled “Director Compensation,” we do not have any program, plan or obligation that requires us to grant new equity compensation on specified dates.

The exercise price of a newly granted option is the closing price of our common stock on the date the option is granted.

Tax and Accounting Treatment of Compensation

In designing our compensation programs, the Compensation Committee considers the financial accounting and tax consequences to us, as well as the tax consequences to our employees. We account for equity compensation paid to our employees under the rules of FASB ASC Topic 718, which requires us to estimate and record an expense for each equity compensation award over the service period of the award and in case of performance awards, if the performance is likely to be achieved. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. Management considers the FASB ASC Topic 718 cost of outstanding equity awards as part of our equity grant recommendations to the Compensation Committee.

Section 162(m) of the Tax Code generally disallows public companies a tax deduction for federal income tax purposes of remuneration in excess of \$1 million paid to certain executive officers. The 2017 Tax Cuts and Jobs Act (the “Tax Act”) enacted on December 22, 2017 repealed an exemption from the \$1 million disallowance for certain performance-based compensation. Due to the repeal of the performance-based compensation exemption, remuneration in excess of \$1 million is exempt from this deduction limit if it qualifies as “performance-based compensation” within the meaning of Section 162(m) only with respect to remuneration paid or payable pursuant to a binding written agreement in effect on or before November 2, 2017 for taxable years beginning on or before January 1, 2017. Thus, options to purchase shares of our common stock, stock appreciation rights that may be exercised for shares of our common stock, restricted stock units granted before April 1, 2015 and other performance-based equity awards granted in 2017 or earlier and outstanding on November 2, 2017 pursuant to a binding written agreement may be exempt from the deduction limit if the conditions of Section 162(m) prior to the Tax Act are satisfied. While our Compensation Committee may consider the deductibility of awards as one factor in determining executive compensation, our Compensation Committee also looks at other factors in making its decisions and retains the flexibility to award compensation that it determines to be consistent with the goals of our executive compensation program, even if the awards are not deductible by us for tax purposes.

Sections 280G and 4999 of the Code provide that executive officers and directors who hold significant equity interests and certain other service providers may be subject to an excise tax if they receive payments or benefits in connection with a change in control that exceeds certain prescribed limits and that the payor company, or a successor, may forfeit a deduction on the amounts subject to this additional tax. Section 409A of the Code also imposes additional significant taxes on the individual in the event that an executive officer, director or other service provider receives “deferred compensation” that does not meet the requirements of Section 409A of the Code. We did not provide any executive officer, including any Named Executive Officer, with a “gross-up” or other reimbursement payment for any tax liability that he or she might owe as a result of the application of Sections 280G, 4999, or 409A of the Code during 2019, and we have not agreed and are not otherwise obligated to provide any Named Executive Officers with such a “gross-up” or other reimbursement.

We also consider the tax impact to employees in designing our compensation programs, including our equity compensation programs. For example, employees generally control the timing of taxation with respect to stock options but do not control the timing with respect to RSUs and PSUs in which income is recognized upon vesting and settlement. To assist employees (including our executives) in satisfying their tax obligations for RSUs and PSUs, we withhold shares

from the vesting RSUs and PSUs to cover applicable taxes. We structure cash bonus compensation so that it is taxable to our employees at the time it is paid to them.

COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Disclosure and Analysis set forth above with Glu's management. Based on its review and these discussions, the Compensation Committee recommended to our Board that the Compensation Discussion and Analysis be included in this proxy statement which is incorporated by reference into our Annual Report on Form 10-K filed with the SEC on February 28, 2020.

Gabrielle Toledano (Chair)

Greg Brandeau

Hany M. Nada

Benjamin T. Smith, IV

EXECUTIVE COMPENSATION

Please see the section titled “Executive Officers” at the end of Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2019, which accompanies these proxy materials, regarding the identity of our executive officers and their respective business experience.

Summary Compensation Table

The following table shows compensation earned during 2019 by our Named Executive Officers. For information about employment contracts, termination of employment and change-of-control arrangements between us and the Named Executive Officers, see “Potential Payments upon Termination or Change in Control” below.

Name and Principal Position	Fiscal Year	Salary (\$)	Bonus (\$)	Stock Awards (\$) ⁽¹⁾	Option Awards (\$) ⁽²⁾	Non-Equity Incentive Plan Compensation (\$) ⁽³⁾	All Other Compensation	Total (\$)
Nick Earl	2019	475,000	—	6,671,863 ⁽⁴⁾	—	—	—	7,146,863
<i>President and Chief Executive Officer</i>	2018	455,769 ⁽⁵⁾	—	1,694,705 ⁽⁶⁾	7,162,611 ⁽⁷⁾	—	—	9,313,086
	2017	450,000	—	—	1,454,246 ⁽⁸⁾	702,000	—	2,606,246
Eric R. Ludwig	2019	375,000	—	3,981,104 ⁽⁴⁾	—	—	—	4,356,104
<i>Executive Vice President, Chief Operating Officer and Chief Financial Officer</i>	2018	375,000	—	—	3,040,889 ⁽⁷⁾	—	—	3,415,890
	2017	375,000	—	—	2,117,652 ⁽⁸⁾	585,000	—	3,077,652
Chris Akhavan	2019	400,000	—	1,952,031 ⁽⁴⁾	—	—	—	2,352,031
<i>Senior Vice President, Business & Corporate Development</i>	2018	400,000	—	—	1,705,320 ⁽⁷⁾	—	—	2,105,320
	2017	307,692 ⁽⁹⁾	—	—	1,702,157 ⁽⁸⁾	436,800	—	2,446,649
Becky Ann Hughes⁽¹⁰⁾	2019	300,923 ⁽¹¹⁾	—	1,983,598 ⁽⁴⁾	—	—	—	2,284,521
<i>Senior Vice President, Revenue</i>								
Scott J. Leichtner	2019	345,000	—	679,577 ⁽⁴⁾	—	—	—	1,024,577
<i>Vice President, General Counsel and Corporate Secretary</i>	2018	325,769 ⁽¹²⁾	—	385,200 ⁽⁶⁾	172,985 ⁽⁷⁾	—	—	883,954
	2017	308,462 ⁽¹²⁾	—	204,733 ⁽¹³⁾	552,256 ⁽⁸⁾	237,900	—	1,303,351

- (1) Amounts shown in this column do not reflect dollar amounts actually received by the officer. Instead, these amounts reflect the aggregate full grant date fair value calculated in accordance with FASB ASC Topic 718. See Note 12 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Form 10-K for the year ended December 31, 2019 for a description of the ASC Topic 718 methodology and assumptions. The number of shares subject to PSUs and RSUs granted in 2019 to our Named Executive Officers is shown in the “Grants of Plan-Based Awards in 2019” table below.
- (2) Amounts shown in this column are calculated in accordance with FASB ASC Topic 718. See Note 12 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Form 10-K for the year ended December 31, 2019 for a description of the ASC Topic 718 methodology and assumptions.
- (3) The amounts received by the Named Executive Officers in 2017 represent total performance-based cash bonuses that were earned during 2017 and paid in 2018 pursuant to our 2017 Executive Bonus Plan. In October 2017, our Compensation Committee decided to grant PSOs with respect to 2018 performance goals to the Named Executive Officers in lieu of a cash bonus for 2018, and the Compensation Committee in October 2018 again granted PSOs with respect to 2019 performance goals to Messrs. Earl, Ludwig and Akhavan in lieu of a cash bonus for 2019. Ms. Hughes received PSUs in lieu of 50% of her cash bonus, while Mr. Leichtner participated in a cash bonus plan for 2019 pursuant to which payments would be made based on the achievement of the same Adjusted EBITDA and bookings targets that were utilized for the PSOs and PSUs issued to the Eligible Officers; Ms. Hughes participated in a similar cash bonus plan with respect to the remaining 50% of her bonus opportunity. Because we did not achieve the Adjusted EBITDA and bookings goals established by the Compensation Committee for 2019 performance, neither Mr.

Leichtner nor Ms. Hughes received a cash bonus for 2019. See the “Compensation Discussion and Analysis” section of this proxy statement for further information regarding the 2019 grants of PSOs and PSUs in lieu of a 2019 cash bonus as well as the cash bonus plan in which Mr. Leichtner and Ms. Hughes participated.

- (4) Represents RSU and PSU awards. The table reflects the full fair market value of the PSU award taking into account the probable outcome of the performance conditions as of December 31, 2019. This value equals the grant date fair values of the maximum shares issuable under the PSU award: \$4,420,359 for Mr. Earl, \$2,718,062 for Mr. Ludwig, \$1,456,698 for Mr. Akhavan, \$1,475,639 for Ms. Hughes and \$226,530 for Mr. Leichtner. See the “Compensation Discussion and Analysis” section of this proxy statement for further information regarding the performance conditions of the PSUs.
- (5) In October 2018, in connection with the Compensation Committee’s annual review of executive compensation, the committee increased Mr. Earl’s annual base salary to \$475,000, effective as of October 1, 2018.
- (6) Represents PSU awards. The table reflects the full fair market value of the PSU award taking into account the probable outcome of the performance conditions as of December 31, 2018. This value equals the grant date fair values of the maximum shares issuable under the PSU award.
- (7) Represents time-based stock option and PSO awards. The grant date fair value of the time-based stock option awards were as follows: \$968,560 for Mr. Earl’s January 2018 grant, \$1,070,718 for Mr. Earl’s October 2018 grant, \$569,658 for Mr. Ludwig, \$208,775 for Mr. Akhavan, and \$172,985 for Mr. Leichtner. The table reflects the full fair market value of the PSO awards taking into account the probable outcome of the performance conditions as of December 31, 2018. The grant date fair value of the maximum shares issuable under the PSO awards are as follows: \$999,689 for Mr. Earl’s January 2018 grant, \$4,123,644 for Mr. Earl’s October 2018 grant, \$2,471,232 for Mr. Ludwig and \$1,496,545 for Mr. Akhavan.
- (8) Represents time-based stock option and PSO awards. The grant date fair value of the time-based stock option awards were as follows: \$688,245 for Mr. Earl, \$466,471 for Mr. Ludwig, \$356,649 for Mr. Akhavan, and \$314,687 for Mr. Leichtner. The table reflects the full fair market value of the PSO awards taking into account the probable outcome of the performance conditions as of December 31, 2017. The grant date fair value of the maximum shares issuable under the PSO awards were as follows: \$1,332,175 for Mr. Earl, \$2,533,674 for Mr. Ludwig, \$2,081,631 for Mr. Akhavan and \$413,163 for Mr. Leichtner.
- (9) In October 2017, in connection with the Compensation Committee’s annual review of executive compensation, the committee increased Mr. Akhavan’s annual base salary to \$400,000, effective as of October 1, 2017.
- (10) On December 17, 2019, Ms. Hughes was promoted from Vice President and General Manager of our Glu Play game development studio to Senior Vice President, Revenue.
- (11) In December 2019, in connection with the Compensation Committee’s annual review of executive compensation, the committee increased Ms. Hughes’ annual base salary to \$360,000, effective as of December 17, 2019.
- (12) In October 2017 and 2018, in connection with the Compensation Committee’s annual review of executive compensation, the committee increased Mr. Leichtner’s annual base salary to \$320,000, effective as of October 1, 2017, and to \$345,000, effective October 1, 2018.
- (13) The table reflects the full fair market value of the PSU award taking into account the probable outcome of the performance conditions as of December 31, 2017. The grant date fair value of the maximum shares issuable under the PSU award was \$285,674.

Grants of Plan-Based Awards in 2019

The following table provides information for the Named Executive Officers about equity awards granted during 2019. All RSUs and PSUs were awarded under our 2007 Equity Incentive Plan.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Plan Incentive Awards (\$)			Estimated Future Payouts Under Equity Plan Incentive Awards (#)		Stock Award; Number of Shares of Stocks or Units	Grant Date Fair Value of Stock Awards (\$) ⁽¹⁾
		Target	Maximum	Threshold	Target	Maximum		
Nick Earl	12/17/19 ⁽²⁾	—	—	—	—	—	369,099	2,251,504
	12/17/19 ⁽³⁾	—	—	25,650	85,500	171,000	—	1,043,100
	12/17/19 ⁽⁴⁾	—	—	110,730	369,099	553,649	—	3,377,259
Eric R. Ludwig	12/17/19 ⁽²⁾	—	—	—	—	—	207,056	1,263,042
	12/17/19 ⁽³⁾	—	—	20,250	67,500	135,000	—	823,500
	12/17/19 ⁽⁴⁾	—	—	62,117	207,056	310,584	—	1,894,562
Chris Akhavan	12/17/19 ⁽²⁾	—	—	—	—	—	81,202	495,332
	12/17/19 ⁽³⁾	—	—	17,550	58,500	117,000	—	713,700
	12/17/19 ⁽⁴⁾	—	—	24,361	81,202	121,803	—	742,998
Becky Ann Hughes	12/17/19 ⁽²⁾	—	—	—	—	—	83,272	507,959
Scott J. Leichtner	12/17/19 ⁽³⁾	—	—	17,550	58,500	117,000	—	713,700
	12/17/19 ⁽⁴⁾	—	—	24,982	83,272	124,908	—	761,939
Scott J. Leichtner	12/17/19 ⁽²⁾	—	—	—	—	—	74,270	453,047
	12/17/19 ⁽³⁾	172,500	345,000	—	—	—	—	—
	12/17/19 ⁽⁴⁾	—	—	7,427	24,757	37,136	—	226,530

- (1) Amounts shown in this column do not reflect dollar amounts actually received by the officer. Instead, these amounts reflect the aggregate full grant date fair value calculated in accordance with FASB ASC Topic 718. See Note 12 — Stock Option and Other Benefit Plans — in the notes to consolidated financial statements contained in our Form 10-K for the year ended December 31, 2019 for a description of the ASC Topic 718 methodology and assumptions. The performance awards reflected in this column reflect the full fair market value of the award taking into account the probable outcome of the performance conditions.
- (2) On December 17, 2019, our Compensation Committee determined to award each of Messrs. Earl, Ludwig, Akhavan and Leichtner and Ms. Hughes time-based RSUs in the amounts listed above as part of their annual refresh awards. The time-based RSUs vest as to 25% of the total number of shares subject to the RSUs on December 17, 2020, with 4.166% of the underlying shares vesting on February 15, 2021, an additional 6.25% of the underlying shares vesting in each of the following 11 quarters on the same day of each third month (e.g., the first such quarterly vesting date will be May 15, 2021, the next quarterly vesting date will be August 15, 2021, etc.), with the final 2.0833% of the underlying shares vesting on February 15, 2024; provided, however, that if any portion of the RSU vests on a date that is a non-trading day on The Nasdaq Stock Market, then the RSU will vest on the next trading day.
- (3) On December 17, 2019, our Compensation Committee determined to award each of Messrs. Earl, Ludwig and Akhavan and Ms. Hughes PSUs in lieu of a cash bonus plan for 2020. The shares indicated represent the threshold, target and maximum number of shares to be issued depending on the achievement of minimum Adjusted EBITDA thresholds and bookings goals during 2020. Mr. Leichtner participates in a cash bonus plan for 2020 as further described in the “Compensation Discussion and Analysis” section above.
- (4) On December 17, 2019, our Compensation Committee determined to award each of Messrs. Earl, Ludwig, Akhavan and Leichtner and Ms. Hughes PSUs in the amounts listed above as part of their annual refresh awards. The shares indicated represent the threshold, target and maximum number of shares to be issued depending on the achievement of minimum Adjusted EBITDA thresholds and bookings goals during 2020, 2021 and 2022 as further described below in footnote 15 to the “Outstanding Equity Awards at the End of 2019” Table.

Outstanding Equity Awards at the End of 2019

The following table provides information with respect to outstanding stock options, RSUs, PSOs and PSUs held by our Named Executive Officers as of December 31, 2019.

Option Awards							Stock Awards				
							Time-Based Vesting Awards		Performance-Based Vesting Awards		
									Equity Incentive Plan Awards: Number of Unearned Shares, Units or Rights That Have Not Vested(#) ⁽⁴⁾	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Rights That Have not Vested(\$)	
Name	Grant Date	Exercisable	Unexercisable	Number of securities underlying unexercised options (#) ⁽¹⁾⁽²⁾	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#) ⁽¹⁾⁽²⁾	Option Exercise Price(\$) ⁽³⁾	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested(#) ⁽²⁾⁽⁴⁾	Market Value of Shares or Units of Stock That Have Not Vested(#) ⁽⁵⁾	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Rights That Have Not Vested(#) ⁽⁴⁾	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Rights That Have not Vested(\$)
Nick Earl	12/09/15 ⁽⁶⁾	300,000	—	—	—	2.92	12/09/25	—	—	—	—
	10/11/16	672,916	177,084	—	—	2.13	10/11/26	—	—	—	—
	11/14/16 ⁽⁷⁾	501,041	148,959	—	—	2.10	11/14/26	—	—	—	—
	01/03/17 ⁽⁷⁾	655,208	194,792	—	—	2.00	01/02/27	—	—	—	—
	10/10/17 ⁽⁸⁾⁽⁹⁾	650,000	—	—	—	3.59	10/10/27	—	—	—	—
	01/02/18 ⁽⁸⁾	271,340	294,937	—	—	3.63	01/02/28	—	—	—	—
	01/02/18 ⁽⁸⁾⁽¹¹⁾	—	—	—	—	—	—	—	—	311,241	\$1,883,008
	01/02/18 ⁽⁸⁾⁽¹⁰⁾	155,620	—	311,241	3.63	01/02/28	01/02/28	—	—	—	—
	10/25/18	104,708	254,292	—	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹²⁾	—	—	301,418	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹³⁾	—	—	809,000	6.42	10/25/28	10/25/28	—	—	—	—
	12/17/19 ⁽¹⁵⁾	—	—	—	—	—	—	369,099	\$2,233,049	—	—
	12/17/19 ⁽¹⁶⁾	—	—	—	—	—	—	—	—	553,649	\$3,349,576
	12/17/19 ⁽¹⁷⁾	—	—	—	—	—	—	—	—	171,000	\$1,034,550
Eric R. Ludwig	10/14/14	205,000	—	—	—	4.10	10/14/20	—	—	—	—
	10/13/15	265,000	—	—	—	4.09	10/13/25	—	—	—	—
	10/11/16	672,916	177,084	—	2.13	10/11/26	10/11/26	—	—	—	—
	10/10/17	151,745	128,401	—	3.59	10/10/27	10/10/27	—	—	—	—
	10/10/17 ⁽⁹⁾	566,976	—	—	3.59	10/10/27	10/10/27	—	—	—	—
	10/10/17 ⁽¹⁰⁾	210,109	—	420,219	3.59	10/10/27	10/10/27	—	—	—	—
	10/25/18	55,708	135,292	—	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹²⁾	—	—	237,962	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹³⁾	—	—	431,000	6.42	10/25/28	10/25/28	—	—	—	—
	12/17/19 ⁽¹⁵⁾	—	—	—	—	—	—	207,056	\$1,252,689	—	—
	12/17/19 ⁽¹⁶⁾	—	—	—	—	—	—	—	—	310,584	\$1,879,033
	12/17/19 ⁽¹⁷⁾	—	—	—	—	—	—	—	—	135,000	\$816,750
Chris Akhavan	10/14/14	100,000	—	—	—	4.10	10/14/20	—	—	—	—
	10/13/15	90,000	—	—	—	4.09	10/13/25	—	—	—	—
	10/11/16	356,250	93,750	—	2.13	10/11/26	10/11/26	—	—	—	—
	10/10/17	116,019	98,172	—	3.59	10/10/27	10/10/27	—	—	—	—
	10/10/17 ⁽⁹⁾	503,979	—	—	3.59	10/10/27	10/10/27	—	—	—	—
	10/10/17 ⁽¹⁰⁾	160,643	—	321,286	3.59	10/10/27	10/10/27	—	—	—	—
	10/25/18	20,416	49,584	—	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹²⁾	—	—	253,826	6.42	10/25/28	10/25/28	—	—	—	—
	10/25/18 ⁽¹³⁾	—	—	158,000	6.42	10/25/28	10/25/28	—	—	—	—
	12/17/19 ⁽¹⁵⁾	—	—	—	—	—	—	81,202	\$491,272	—	—
	12/17/19 ⁽¹⁶⁾	—	—	—	—	—	—	—	—	121,803	\$736,908
	12/17/19 ⁽¹⁷⁾	—	—	—	—	—	—	—	—	117,000	\$707,850

Becky Ann Hughes	04/13/16	—	—	—	—	—	12,500	\$75,625	—	—
	10/11/16	2,083	20,834	—	2.13	10/11/26	—	—	—	—
	10/11/16	—	—	—	—	—	25,000	\$151,250	—	—
	10/11/17 ⁽⁹⁾	129,932	—	—	3.59	10/10/27	—	—	—	—
	10/11/17	71,656	60,634	—	3.59	10/10/27	—	—	—	—
	10/11/17 ⁽¹¹⁾	—	—	—	—	—	—	—	37,140	\$224,697
	10/25/18 ⁽¹²⁾	—	—	—	—	—	—	—	33,410	\$202,131
	10/25/18 ⁽¹⁴⁾	—	—	—	—	—	—	—	208,000	\$1,258,400
	12/17/19 ⁽¹⁵⁾	—	—	—	—	—	83,272	\$503,796	—	—
	12/17/19 ⁽¹⁶⁾	—	—	—	—	—	—	—	124,908	\$755,693
	12/17/19 ⁽¹⁷⁾	—	—	—	—	—	—	—	117,000	\$707,850

Scott J. Leichtner	10/14/14	60,000	—	—	4.10	10/14/20	—	—	—	—
	10/13/15	90,000	—	—	4.09	10/13/25	—	—	—	—
	10/11/16	277,083	72,917	—	2.13	10/11/26	—	—	—	—
	10/10/17	102,369	86,621	—	3.59	10/10/27	—	—	—	—
	10/10/17 ⁽⁹⁾	201,592	—	—	3.59	10/10/27	—	—	—	—
	10/10/17 ⁽¹¹⁾	—	—	—	—	—	—	—	53,050	\$320,953
	10/25/18	16,916	41,084	—	6.42	10/25/28	—	—	—	—
	10/25/18 ⁽¹⁴⁾	—	—	—	—	—	—	—	60,000	\$363,000
	12/17/19 ⁽¹⁵⁾	—	—	—	—	—	74,270	\$449,334	—	—
	12/17/19 ⁽¹⁶⁾	—	—	—	—	—	—	—	37,136	\$224,673

- (1) Unless otherwise indicated, each award in these columns is a stock option that was granted under our 2007 Equity Incentive Plan. Except as otherwise described in these footnotes, each stock option vests with respect to 25% of the underlying shares on the first anniversary of the grant date and as to $\frac{1}{48}$ th of the shares of common stock underlying it monthly thereafter.
- (2) We have entered into the severance agreements described under “Potential Payments upon Termination or Change in Control” below, which provide for acceleration of vesting of each equity award made or to be made to our Named Executive Officers other than Ms. Hughes if certain events occur following a change of control of Glu.
- (3) Represents the fair market value of a share of our common stock, which is equal to the closing price of our common stock on The Nasdaq Global Select Market on the grant date.
- (4) Each award in this column is a time-vesting RSU or a PSU award that was granted under our 2007 Equity Incentive Plan. Except as otherwise noted, each RSU vests as to 25% of the total number of shares on the applicable quarterly vesting date that is at least one year from the grant date (the “RSU First Vesting Date”), with the remaining 75% of the shares vesting in equal quarterly installments over the next three years following the RSU First Vesting Date on the same day of each third month (e.g., if the RSU First Vesting Date is February 15, the first quarterly vesting date will be May 15, the next quarterly vesting date will be August 15, etc.); provided, however, that if any portion of the RSU vests on a date that is a non-trading day on The Nasdaq Global Select Market, then the award will vest on the next trading day.
- (5) Represents the product of the maximum number of shares subject to the RSU or PSU, as applicable, that have not vested multiplied by the closing price of our common stock on The Nasdaq Global Select Market on December 31, 2019, the last trading day of 2019, which was \$6.05
- (6) On December 7, 2015, our Compensation Committee approved an award to Mr. Earl of an option to purchase 300,000 shares of our common stock and 500,000 RSUs under our 2008 Equity Inducement Plan in connection with our hiring of Mr. Earl.
- (7) On November 14, 2016, our Compensation Committee approved an award to Mr. Earl of an option to purchase 1,500,000 shares of our common stock. However, due to a limitation that was previously contained in our 2007 Equity Incentive Plan regarding the number of shares that may be awarded to any employee during a calendar year (the “Plan Grant Limitation”), we were only able to award Mr. Earl an option to purchase 650,000 shares of our common stock

at such time. Due to the Plan Grant Limitation, our Compensation Committee on November 14, 2016 approved a bifurcation of this grant, and Mr. Earl was awarded the 850,000 shares balance of his option on January 3, 2017, the first trading day of 2017, with identical vesting to the option granted on November 14, 2017 (i.e., 25% of the underlying shares vested on November 14, 2017 and $\frac{1}{48}$ th of the underlying shares vest monthly thereafter).

- (8) On October 10, 2017, our Compensation Committee approved a PSO award under our 2007 Equity Incentive Plan to Mr. Earl to purchase up to a maximum of 650,000 shares of our common stock. However, due to the Plan Grant Limitation, we were not able to grant Mr. Earl further equity awards in 2017. On January 2, 2018, our Compensation Committee awarded Mr. Earl a PSO award to purchase up to 466,861 shares, a PSU award covering up to 466,861 shares, and an option to purchase 566,277 shares.
- (9) On October 10, 2017, our Compensation Committee determined to award each of these Named Executive Officers PSOs in lieu of a cash bonus plan for 2018. The number of shares subject to the PSOs that would become vested and exercisable, if any, depended on the achievement of minimum Adjusted EBITDA thresholds and bookings goals during 2018. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings during 2018, the maximum number of PSOs that these Executive Officers could earn, as indicated in the table, vested and became exercisable in February 2019.
- (10) Represents PSOs containing Adjusted EBITDA thresholds and bookings goals for each of 2018, 2019 and 2020, with one-third of the maximum shares subject to the PSOs earnable in each of those years. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings for 2018, the maximum number of PSOs that Messrs. Earl, Ludwig, and Akhavan could earn for 2018 (which is one-third of the shares indicated in the table) vested and became exercisable in February 2019. For 2019 and 2020, Glu will determine its Adjusted EBITDA and bookings for each of these years in early 2020 and 2021, respectively, and to the extent that these Named Executive Officers earn any PSOs based on Glu's bookings and Adjusted EBITDA for such years, the shares earned will fully vest in February 2020 and 2021, respectively.
- (11) Represents PSUs containing Adjusted EBITDA thresholds and bookings goals for each of 2018, 2019 and 2020, with one-third of the maximum shares subject to the PSUs earnable in each of those years. Since we met the required Adjusted EBITDA goal and generated more than the maximum level of bookings for 2018, the maximum number of PSUs that these Named Executive Officers could earn for 2018 (which is one-third of the shares indicated in the table) vested and became exercisable in February 2019. We met the Adjusted EBITDA threshold and generated bookings between target and maximum with respect to the targets that the Compensation Committee established in October 2017 for 2019 performance and therefore the second tranche of the performance awards issued in 2017 vested at 77.7%. For 2020, Glu will determine its Adjusted EBITDA and bookings in early 2021 and to the extent that these Named Executive Officers earn any PSUs based on Glu's bookings and Adjusted EBITDA for 2020 performance, the shares earned will fully vest in February 2021.
- (12) On October 25, 2018, our Compensation Committee determined to award each of these Named Executive Officers PSOs, or PSUs in the case of Ms. Hughes, under our 2007 Equity Incentive Plan in lieu of a cash bonus plan for 2019; Ms. Hughes received PSUs in lieu of 50% of her cash bonus and participated in a cash bonus plan with respect to the remaining 50% of her bonus opportunity. The shares indicated represent the maximum number of shares to be issued depending on the achievement of minimum Adjusted EBITDA thresholds and bookings goals during 2019. Because we did not achieve the Adjusted EBITDA and bookings goals established by the Compensation Committee for 2019 performance, none of these PSOs or PSUs vested.
- (13) Represents PSOs containing Adjusted EBITDA thresholds and bookings goals for each of 2019, 2020 and 2021, with one-third of the maximum shares subject to the PSOs earnable in each of those years. We did not meet the Adjusted EBITDA threshold or the bookings goals that the Compensation Committee established in October 2018 for 2019 performance and therefore the first tranche of the performance awards issued in 2018 did not vest. Glu will determine its Adjusted EBITDA and bookings for each of 2020 and 2021 early in 2021 and 2022, respectively, and to the extent that these Named Executive Officers earn any PSOs based on Glu's bookings and Adjusted EBITDA for such years, the shares earned will fully vest in February 2020, 2021 and 2022, respectively.
- (14) Represents PSUs containing Adjusted EBITDA thresholds and bookings goals for each of 2019, 2020 and 2021, with one-third of the maximum shares subject to the PSUs earnable in each of those years. We did not meet the Adjusted EBITDA threshold or the bookings goals that the Compensation Committee established in October 2018 for 2019 performance and therefore the first tranche of the performance awards issued in 2018 did not vest. Glu will determine

its Adjusted EBITDA and bookings for each of 2020 and 2021 early in 2021 and 2022, respectively, and to the extent that these Named Executive Officers earn any PSUs based on Glu's bookings and Adjusted EBITDA for such years, the shares earned will fully vest in February 2020, 2021 and 2022, respectively.

- (15) Represents time-based RSUs that vest as to 25% of the total number of shares subject to the RSUs on December 17, 2020, with 4.166% of the underlying shares vesting on February 15, 2021, an additional 6.25% of the underlying shares vesting in each of the following 11 quarters on the same day of each third month (e.g., the first such quarterly vesting date will be May 15, 2021, the next quarterly vesting date will be August 15, 2021, etc.), with the final 2.0833% of the underlying shares vesting on February 15, 2024; provided, however, that if any portion of the RSU vests on a date that is a non-trading day on The Nasdaq Stock Market, then the RSU will vest on the next trading day.
- (16) Represents PSUs containing Adjusted EBITDA thresholds and bookings goals for each of 2020, 2021 and 2022, with one-third of the maximum shares subject to the PSUs earnable in each of those years. Glu will determine its Adjusted EBITDA and bookings for each of 2020, 2021 and 2022 early in 2021, 2022 and 2023, respectively, and to the extent that these Named Executive Officers earn any PSUs based on Glu's bookings and Adjusted EBITDA for such years, the shares earned will fully vest in February 2021, 2022 and 2023, respectively.
- (17) On December 17, 2019, our Compensation Committee determined to award these Named Executive Officers PSUs in lieu of a cash bonus plan for 2020. The PSUs indicated represent the maximum number of shares to be issued depending on the achievement of minimum Adjusted EBITDA thresholds and bookings goals during 2020. Glu will determine its 2020 Adjusted EBITDA and bookings in early 2021, and to the extent that these Named Executive Officers earn any PSUs based on Glu's 2020 bookings and Adjusted EBITDA, such PSOs will fully vest in February 2021.

Option Exercises and Stock Vested in 2019

The following table shows information about stock option exercises and RSU award settlements for each of the Named Executive Officers during 2019, including the value realized upon exercise or settlement. Other than RSUs, we have not granted any stock awards (as opposed to other forms of equity compensation) to any of our employees that settled during 2019.

Name	Number of Shares Acquired on Exercise of Options ⁽¹⁾	Value Realized on Exercise of Options ⁽²⁾ (\$)	Number of Shares Acquired On Settlement of RSUs ⁽³⁾	Value Realized on Settlement of RSUs ⁽⁴⁾ (\$)
Nick Earl	—	—	280,620	2,370,871
Eric R. Ludwig	138,000	604,440	83,750	594,835
Chris Akhavan	—	—	27,500	195,319
Becky Ann Hughes	77,083	251,298	71,070	554,997
Scott J. Leichtner	54,357	89,780	54,025	448,102

(1) Amounts reported in this column include 99,819 shares relinquished by Mr. Ludwig and cancelled by Glu in exchange for Glu's agreement to pay federal and state tax withholding obligations of Mr. Ludwig resulting from the cashless exercise of the options.

(2) The value realized on exercise of option awards is calculated as the difference between the price at which the exercised shares were sold (excluding brokerage commissions) and the exercise price of the options.

(3) Amounts reported in this column include shares relinquished by the Named Executive Officer and cancelled by Glu in exchange for Glu's agreement to pay federal and state tax withholding obligations of the Named Executive Officer resulting from the vesting of RSUs, including withholding of 141,369 shares from Mr. Earl, 45,610 shares from Mr. Ludwig, 14,060 shares from Mr. Akhavan and 27,243 shares from Mr. Leichtner.

(4) The value realized on settlement of RSUs is calculated by multiplying the number of RSUs settled by the closing price of Glu's common stock on the settlement date.

Pension Benefits and Nonqualified Deferred Compensation

We do not provide any defined benefit plan pension benefits or a nonqualified deferred compensation plan to our Named Executive Officers.

Potential Payments upon Termination or Change in Control

Mr. Earl

On November 10, 2016, we entered into both an employment agreement and a Change of Control Severance Agreement with Nick Earl, our President and Chief Executive Officer.

The employment agreement provides that should Mr. Earl terminate his employment based on an “involuntary termination” or be terminated, other than for “cause” or disability, at any time, other than within twelve months after a “change in control transaction,” and Mr. Earl delivers to us a signed agreement and general release, then Mr. Earl will be entitled to the following severance benefits:

- 12 months of his then-current annual base salary, payable in lump-sum; and
- up to 12 months of continuation coverage for him (and any eligible dependents) pursuant to COBRA.

The Change of Control Severance Agreement provides that if Mr. Earl terminates his employment based on an “involuntary termination” or if he is terminated, other than for “cause” or disability, within 12 months after a “change in control transaction,” and Mr. Earl delivers to us a signed agreement and general release, he would receive the same benefits set forth above pursuant to his employment agreement, except that he will also receive:

- a lump-sum payment of his annual bonus for such calendar year, based on the target potential amount; and
- full vesting for all of his outstanding and unvested equity awards that were granted after November 10, 2016 (with vesting of performance-based equity to be based upon target-level achievement).

Outstanding and unvested equity awards that were granted prior to November 10, 2016 remain subject to the severance agreement we entered into with Mr. Earl on February 8, 2016. Such severance agreement provides that if Mr. Earl terminates his employment based on an “involuntary termination” or is terminated, other than for “cause” or disability, within 12 months after a “change in control transaction,” he would receive an additional 36 months of vesting with respect to each of his then outstanding and not fully vested equity awards.

Mr. Ludwig

On October 10, 2008, we entered into a severance agreement with Eric R. Ludwig, our Executive Vice President, Chief Operating Officer and Chief Financial Officer, which was amended on July 7, 2011. Under this agreement, as amended, if Mr. Ludwig terminates his employment based on an “involuntary termination” or if he is terminated, other than for “cause” or disability, within 12 months after a “change in control transaction,” he would receive 12 months of his then-current annual base salary, payable in lump-sum. Mr. Ludwig would also receive a lump-sum payment of his annual bonus for such calendar year, based on the target potential amount. Additionally, Mr. Ludwig’s then outstanding and unvested equity awards would become fully vested (with vesting of performance-based equity to be based upon target-level achievement). Finally, Mr. Ludwig would receive reimbursement for up to 12 months of COBRA premiums.

Mr. Akhavan and Mr. Leichtner

On July 7, 2011, we entered into a change of control severance agreement with Scott Leichtner, our Vice President, General Counsel and Corporate Secretary, and on June 3, 2013, we entered into a change of control severance agreement with Chris Akhavan. Each of these agreements provides that if the executive terminates his employment based on an “involuntary termination” or is terminated, other than for “cause” or disability, within 12 months after a “change in control transaction,” he would receive six months of his then-current annual base salary, payable in lump-sum. Each officer would also receive 50% of his annual bonus for such calendar year, based on the target potential amount. Additionally, each officer would receive an additional 36 months of vesting with respect to each of his then outstanding and not fully vested

equity awards (with vesting of performance-based equity to be based upon target-level achievement). Finally, each officer would receive reimbursement for up to six months of COBRA premiums.

The following definitions are used in the severance agreements and retention arrangements described for the Named Executive Officers:

“Cause” is defined to mean (1) the executive’s committing an act of gross negligence, gross misconduct or dishonesty, or other willful act, including misappropriation, embezzlement or fraud, that materially adversely affects us or any of our customers, suppliers or partners, (2) his personal dishonesty, willful misconduct in the performance of services for us, or breach of fiduciary duty involving personal profit, (3) his being convicted of, or pleading no contest to, any felony or misdemeanor involving fraud, breach of trust or misappropriation or any other act that our Board reasonably believes in good faith has materially adversely affected, or upon disclosure will materially adversely affect, us, including our public reputation, (4) any material breach of any agreement with us by him that remains uncured for 30 days after written notice by us to him, unless that breach is incapable of cure, or any other material unauthorized use or disclosure of our confidential information or trade secrets involving personal benefit or (5) his failure to follow the lawful directions of our Board or, if he is not the Chief Executive Officer, the lawful directions of the Chief Executive Officer, in the scope of his employment unless he reasonably believes in good faith that these directions are not lawful and notifies our Board or Chief Executive Officer, as the case may be, of the reasons for his belief.

A “change in control transaction” is defined to mean the closing of (1) a merger or consolidation in one transaction or a series of related transactions, in which our securities held by our stockholders before the merger or consolidation represent less than 50% of the outstanding voting equity securities of the surviving corporation after the transaction or series of related transactions, (2) a sale or other transfer of all or substantially all of our assets as a going concern, in one transaction or a series of related transactions, followed by the distribution to our stockholders of any proceeds remaining after payment of creditors or (3) a transfer of more than 50% of our outstanding voting equity securities by our stockholders to one or more related persons or entities other than Glu in one transaction or a series of related transactions.

“Involuntary Termination” is defined to mean the executive’s resignation of employment from Glu expressly based on the occurrence of any of the following conditions, without the executive’s informed written consent, provided, however, that with respect to each of the following conditions, the executive must (1) within 90 days following its occurrence, deliver to us a written notice explaining the specific basis for the executive’s belief that he is entitled to terminate his employment due to an Involuntary Termination and (2) give us an opportunity to cure any of the following within 30 days following delivery of such notice and explanation: (1) a material reduction in his duties, position or responsibilities, or his removal from these duties, position and responsibilities, unless he is provided with a position of substantially equal or greater organizational level, duties, authority and compensation; provided, however, that a change of title, in and of itself, or a reduction of duties, position or responsibilities solely by virtue of our being acquired and made part of a larger entity will not constitute an “Involuntary Termination,” (2) a greater than 15% reduction in his then current annual base compensation that is not applicable to our other executive officers or (3) without his express written consent, a relocation to a facility or a location more than 30 miles from his then current location of employment. Involuntary Termination does not include a termination of employment for death or permanent disability.

The table below estimates as of December 31, 2019 the potential payments to Messrs. Earl, Ludwig, Akhavan and Leichtner should such officer terminate their employment based on an “involuntary termination” or be terminated other than for “cause” or disability either (1) within 12 months following a “change in control transaction” or (2) or in the absence of a “change in control transaction.” We have not entered into a change of control agreement with Ms. Hughes.

Name	Benefits	Termination Other Than for Cause or Disability or by Named Executive Officer Based on an Involuntary Termination Within 12 Months Following	Termination Other Than for Cause or Disability or by Named Executive Officer Based on an Involuntary Termination Absent a Change in Control
		Change in Control Transaction(\$)	Transaction(\$)
Nick Earl	Severance	475,000	475,000
	Equity Acceleration ⁽¹⁾	6,979,185 ⁽³⁾	
	COBRA Premium ⁽²⁾	21,046	21,046
	Total Value	7,475,231	496,046
Eric R. Ludwig	Severance	375,000	
	Equity Acceleration ⁽¹⁾	4,612,948 ⁽⁴⁾	
	COBRA Premium ⁽²⁾	34,120	
	Total Value	5,022,068	
Chris Akhavan	Severance	200,000	
	Equity Acceleration ⁽¹⁾	2,472,382 ⁽⁵⁾	
	COBRA Premium ⁽²⁾	5,409	
	Total Value	2,677,791	
Scott J. Leichtner	Severance	172,500	
	Equity Acceleration ⁽¹⁾	1,500,512 ⁽⁵⁾	
	COBRA Premium ⁽²⁾	11,817	
	Total Value	1,684,829	

- (1) These amounts are calculated by aggregating the sums determined by multiplying, for each award the number of shares accelerated by (a) the positive difference, if any, between the closing price per share of our common stock on The Nasdaq Global Select Market on December 31, 2019, the last trading day of 2019, which was \$6.05, and the option exercise price per share for stock options, and (b) \$6.05 per share in the case of RSUs and PSUs.
- (2) COBRA payout amounts are estimated based on the cost of the monthly premium and represent coverage for medical, dental and vision insurance for the executive and his eligible dependents, if any.
- (3) Reflects (i) full acceleration of all unvested shares subject to outstanding equity awards held by Mr. Earl on December 31, 2019 and granted after November 10, 2016 and (ii) an additional 36 months of vesting of all outstanding equity awards held by Mr. Earl on December 31, 2019 and granted prior to November 10, 2016. PSOs and PSUs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.
- (4) Reflects full acceleration of all unvested shares subject to outstanding equity awards held by Mr. Ludwig on December 31, 2019. PSOs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.
- (5) Reflects an additional 36 months of vesting of all outstanding time-based equity awards and outstanding performance-based equity awards (at the target level of performance achievement) held by the executive officer on December 31, 2019. PSOs and PSUs will accelerate free of all restrictions (other than those set forth in our insider trading policies then in effect or imposed by applicable law) based on the target amount.

Chief Executive Officer Pay Ratio Disclosure

Our ratio of the annual total compensation of our CEO to the median of the annual total compensation of all our employees (excluding our CEO) for 2019 is 80 to 1. We believe this ratio, which was calculated in a manner consistent with Item 402(u) of Regulation S-K, to be a reasonable estimate, based upon the assumptions and adjustments described below. As disclosed in the 2019 Summary Compensation Table above, the annual total compensation for 2019 for our

CEO was \$7,146,863. The median of the annual total compensation for 2019 for all our employees was \$89,738. In identifying the median employee under Item 402(u), reporting companies are permitted to use reasonable estimates, assumptions and methodologies based on their own facts and circumstances. As a result, the disclosure regarding the compensation of our median employee may not be directly comparable to similar disclosure by other reporting companies.

Calculation Methodology

In 2019, there was no change in our employee population or employee compensation arrangements that we believe would significantly impact the pay ratio. Accordingly, for purposes of calculating the pay ratio set forth above, we are permitted to use the same median employee that we identified for purposes of our 2018 pay ratio. The median employee that we identified for purposes of our 2018 pay ratio has since terminated employment with us. As a result, we have identified a substitute median employee with substantially similar compensation to that of our original median employee.

For a description of our methodology for identifying the median employee, see “Chief Executive Officer Pay Ratio Disclosure” on page 48 of our definitive proxy statement filed with the Securities and Exchange Commission on April 26, 2019.

We calculated the 2019 annual total compensation for the median employee using the same methodology we used to calculate the 2019 amount reported for our Named Executive Officers in the “Total” column of the Summary Compensation Table.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Review, Approval or Ratification of Transactions with Related Persons

Our Nominating and Governance Committee has adopted a written related-person transactions policy. The Nominating and Governance Committee reviews transactions that may be “related-person transactions,” which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed \$120,000 and in which a related person has or will have a direct or indirect material interest. For purposes of the policy, a related person is a director, executive officer, nominee for director, or a greater than 5% beneficial owner of our common stock and their immediate family members, in each case as of January 1, 2019, the beginning of our last fiscal year.

This policy provides that, barring special facts or circumstances, a related person does not have a direct or indirect material interest in the following categories of transactions:

- employment-related compensation to executive officers that is approved by the Compensation Committee;
- compensation to non-employee directors that is reported in our proxy statement;
- any transaction with another company to which the related party’s only relationship is as a director, beneficial owner of less than 10% of that company’s shares, or employee (other than an executive officer), if the aggregate amount involved does not exceed the greater of \$500,000 or 2% of that company’s total annual revenues;
- any transaction where the related party’s interest arises solely from the ownership of our common stock and all holders of our common stock receive the same benefit on a pro rata basis (e.g., a dividend); and
- ordinary course business travel and expenses, advances and reimbursements.

In determining whether to approve or ratify a related-person transaction, the Nominating and Governance Committee will take into account, among other factors it deems appropriate, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances, the extent of the related party’s interest in the transaction, the benefits to us of the transaction, the potential impact on a director’s independence and whether the transaction would impair the judgment of a director or executive officer to act in our best interests and those of our stockholders.

Tencent Transaction

On April 29, 2015, Glu agreed to issue in a private placement offering to Red River Investments Limited (“Red River”), a wholly-owned subsidiary of Tencent, an aggregate of 21,000,000 shares of Glu’s common stock at a purchase price of \$6.00 per share, for aggregate proceeds of \$126 million (the “Offering”). The shares of Glu’s common stock were issued in two separate closings on each of April 29, 2015 and June 3, 2015. In connection with the Offering, Red River became a greater than 5% owner of Glu, and Glu and Tencent became parties to a voting and standstill agreement, pursuant to which Glu agreed to cause a representative of Tencent to be elected and appointed as a new member of the Board as a Class I director, and to subsequently nominate for future director elections a representative of Tencent to the Board. Mr. Feder, the current representative of Tencent on the Board was elected on January 26, 2017 pursuant to the voting and standstill agreement. Tencent, through Red River and another of its controlled affiliates, held 13.85% of Glu’s outstanding shares as of April 20, 2020.

Indemnification Agreements

We have entered into indemnity agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnity agreements may require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnity agreements may also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers. We have obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these officers and directors pursuant to our indemnification obligations or otherwise as a matter of law.

Other than the indemnification agreements and the compensation arrangements that are described in this proxy statement under the headings “Compensation Discussion and Analysis,” “Executive Compensation” and “Director Compensation,” since January 1, 2019, we have not been a party to any transaction or series of similar transactions in which the amount involved exceeded or will exceed \$120,000 and in which any director, nominee for director, executive officer, holder of more than 5% of our common stock or certain persons or entities affiliated with them had or will have a material interest.

See also “Corporate Governance — Director Independence” for information the Board considered in determining the independence of our non-employee directors.

**PROPOSAL NO. 2 –
APPROVAL OF THE AMENDMENT AND RESTATEMENT OF OUR 2007 EQUITY INCENTIVE PLAN**

On April 23, 2020, the Board, upon recommendation of the Compensation Committee, adopted the Sixth Amended and Restated 2007 Equity Incentive Plan (the “Restated Plan”), subject to stockholder approval. The Restated Plan is an amendment and restatement of the Glu Mobile Inc. Fifth Amended and Restated 2007 Equity Incentive Plan (the “2007 Plan”), which was last amended in June 2019. If our stockholders do not approve this Proposal, then the 2007 Plan will continue without the amendments in accordance with its terms.

The principal terms of the Restated Plan are summarized below. This summary is not a complete description of the Restated Plan, and it is qualified in its entirety by reference to the complete text of the Restated Plan document. The Restated Plan, marked to show changes from the 2007 Plan, is attached as Appendix A to this proxy statement.

Amendments to the 2007 Plan

The following are the primary amendments to the 2007 Plan contained in the Restated Plan:

- an increase to the available share reserve by 7,000,000 shares of our common stock (for a cumulative aggregate share authorization of 58,573,191 shares); and
- certain clarifying and technical changes.

Rationale For and Reasons Why the Board Recommends a Vote FOR the Restated Plan

Equity Compensation Is a Critical Element of Our Compensation Policy.

We believe that long-term incentive compensation programs align the interests of management, employees and stockholders to create long-term stockholder value. We strongly believe that the approval of the Restated Plan is essential to our continued success, because we otherwise may not have sufficient shares available under our 2007 Plan to attract and retain new employees or to motivate and retain our existing employees. This is particularly critical since our employees are our most valuable asset. In addition, in December 2019 our Compensation Committee determined to continue its practice of replacing cash bonuses with performance-based equity awards for our Eligible Officers. We expect that the Compensation Committee will similarly utilize performance-based equity awards in lieu of cash bonuses for at least some of our senior leadership team for 2021, which will impact our utilization of shares from the Restated Plan during the next 12 months.

Accordingly, approving the Restated Plan is in the best interest of our stockholders because equity awards help us to:

- attract, motivate and retain talented employees;
- align employee and stockholder interests;
- link employee compensation with company performance; and
- maintain a culture based on employee stock ownership.

After carefully forecasting our anticipated growth, hiring plans and retention needs and considering our historical grant and forfeiture rates and the expectation that the Compensation Committee will utilize performance-based equity awards in lieu of cash bonuses for our Eligible Officers for 2021, we anticipate the 7,000,000 shares that we seek to add to the Restated Plan — combined with shares currently reserved under, or that we may add to, our 2018 Inducement Plan (which we may use for certain newly hired employees and to grant equity awards in connection with acquisitions) will be sufficient to attract and retain key employees through at least June 2021, at which point we expect to again ask for stockholder approval for an increase to the number of shares available under the Restated Plan. However, a change in business conditions or our strategy could alter this projection.

The Restated Plan Conforms to Best Practices in Equity Incentive Plans.

The Restated Plan conforms to best practices in equity incentive plans in that it:

- contains:
 - a limitation providing that no equity awards will vest, in whole or in part, prior to one year from the date of grant (subject to a 5% carve-out as described below);
 - a limitation of \$600,000 on the grant date fair value of equity awards that may be granted to any non-employee director in any calendar year, plus an additional \$600,000 in grant date fair value for one-time awards to a newly appointed or elected non-employee director;
 - a provision providing that any equity awards issued to our executive officers will be subject to any clawback or recoupment policies in effect or as may be amended or adopted from time to time;
 - a restriction that the following shares will not be available for future grant under the Restated Plan: (1) shares used in connection with the exercise of a stock option or stock appreciation right to pay the exercise price or purchase price of such award or satisfy applicable tax withholding obligations and (2) the gross number of shares subject to stock appreciation rights or stock options that are exercised;
 - a restriction that only shares used to satisfy applicable minimum tax withholding obligations on any award other than a stock option or a stock appreciation right will be available for future grant under the Restated Plan;
 - a prohibition against repricing or certain other exchanges of stock options and stock appreciation rights without stockholder approval;
 - a limitation on the transferability of awards, since generally awards may not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, except by will or the laws of descent and distribution; and
 - a provision prohibiting the grant of discounted options or stock appreciation rights.
- does not contain:
 - single-trigger vesting acceleration rights, other than on a limited basis for non-employee directors;
 - tax gross-ups; and
 - an evergreen provision to automatically increase the number of shares available under it.

Our Use of Equity Supports a Strong Pay-for-Performance Culture and Has Been Managed to Stay within Industry Norms.

We have carefully managed our annual equity award dilution over the past three years by, among other things, limiting equity awards to high-performing employees, determining the appropriate size of awards based on our review of market data and reviewing market practices for equity burn rates in our industry.

Period	Options Granted	RSUs Granted	PSUs Granted	PSOs Granted	PSUs Earned	PSOs Earned	Burn Rate ⁽¹⁾
Fiscal 2017	5,346	2,360	661	4,246	0	0	6.55%
Fiscal 2018	6,092	278	2,909	2,737	0	0	4.60%
Fiscal 2019	815	2,936	2,780	0	700	3,512	6.64%
3-Yr. Average							5.93%

(1) “Burn Rate” means the sum of the number of shares subject to time-vesting equity awards granted and the number of performance-vesting shares earned in the fiscal year (using a 1.5x multiplier for each RSU or PSU award), divided by

basic weighted average common shares outstanding during the fiscal year. All share-based amounts in this table are displayed in thousands.

Beginning in October 2017, we modified our executive compensation program to incorporate a heavy weighting on performance-based equity. As a result, our equity program is strongly aligned with stockholders' interests given that our executive leadership's annual and long term incentives (including the annual bonus opportunity) mainly consists of performance based equity awards in the form of PSOs or PSUs whose vesting is based on the achievement of challenging performance targets in addition to the time-vesting period applicable to each award. In particular, a significant number of the PSOs granted during 2017 and 2018 and the PSUs granted in 2019 reflect a change in our compensation strategy to replace, for key members of our senior leadership team, the annual cash bonus plan with PSOs for 2018 and 2019 and with PSUs for 2020 that vest based on our achievement of pre-established annual bookings and Adjusted EBITDA goals. In addition, the annual equity awarded to our senior leadership team in each of October 2017, October 2018 and December 2019 consisted of a mix of multi-year PSUs, PSOs and time vesting stock options, with no time vesting RSUs granted with respect to the 2017 and 2018 grants and a mix of multi-year PSUs with time vesting RSUs with respect to the 2019 grants. The Compensation Committee, our Board of Directors and management team supported these changes in our compensation strategy to reinforce our business objectives and to drive a focus on sustained stockholder value creation.

We will continue to review our compensation plans and strategies as our business evolves and will continue to use equity and performance-based incentives to drive accountability by our leadership team and to reward for sustained strong performance. We believe that increasing the number of shares available for grant under the Restated Plan will enable us to continue to provide competitive equity compensation to our employees and directors while continuing to comply with best practices for equity incentive plan grant practices.

We Broadly Distribute Equity Awards.

Our equity awards are widely spread among our employees. For example, during 2019, our Named Executive Officers received an aggregate of restricted stock units (time-based and performance-based) for 2,502,979 shares, or approximately 38.3% of aggregate equity awards we granted to all employees in 2019. In 2019, a majority of our North American employees who started with us during the year received an RSU and/or stock option award in the month following their start date, and approximately 270 of our global employees (representing 37.8% of all existing global employees as of December 31, 2019) received a refresh stock option award.

Conclusion

If our stockholders do not approve the Restated Plan, our plans to operate our business would be materially adversely affected because we otherwise may not have sufficient shares available under our 2007 Plan to attract and retain new employees or to motivate and retain our existing employees. Additionally, if the shares available for grant under the 2007 Plan are not increased, we may need to use our 2018 Inducement Plan — which is a non-stockholder approved plan — to grant awards to newly hired employees and find other ways to retain our current employees, as they are not eligible to receive awards under the 2018 Inducement Plan due to rules put in place by Nasdaq with respect to non-stockholder approved plans. This could require us to offer material cash-based incentives to compete for talent as well as to revert back to annual cash incentive bonus plans for our Eligible Officers rather than utilizing PSUs, which could have a significant impact upon our quarterly results of operations and balance sheet. Moreover, this would not be competitive with most other technology companies in the San Francisco Bay Area with which we compete for talent or our peer companies. We believe that a cash-based incentive program for all of our executive leadership would not have significant long-term retention value and would not serve to align our employees' interests as closely with those of our stockholders in the absence of equity incentives.

Our future success depends heavily on our ability to attract and retain high caliber employees. The ability to grant equity awards is a necessary and powerful recruiting and retention tool for us to hire and motivate the quality personnel we need to compete.

For these reasons, we request that our stockholders approve the Restated Plan. If the Restated Plan is not approved, we do not expect to be able to offer competitive equity packages to retain our current employees and hire new employees.

General

The Restated Plan provides for the grant of incentive stock options, nonstatutory stock options, restricted stock awards, stock appreciation rights, RSUs and stock bonuses and performance shares (collectively, the “stock awards”). The Restated Plan also provides the ability to grant performance shares that may qualify the compensation attributable to those awards as performance-based compensation for purposes of the Code, as explained in greater detail below.

Incentive stock options granted under the Restated Plan are intended to qualify as “incentive stock options” within the meaning of Section 422 of the Code; nonstatutory stock options granted are not intended to qualify as incentive stock options under the Code. See “Federal Income Tax Information” for a discussion of the tax treatment of the various stock awards.

Purpose

Our Board adopted the Restated Plan to provide a means to retain the services of our employees, directors, consultants, independent contractors and advisors, and those of any parent or subsidiary of ours, to attract and retain the new talent to our company that we will require to execute our strategy and grow our business, and to provide a means by which these eligible individuals may be given an opportunity to benefit from increases in the value of our common stock through the grant of equity awards, thereby aligning the long-term compensation and interests of those individuals with our stockholders.

Administration

The Restated Plan is administered by our Compensation Committee, all of the members of which are non-employee directors under applicable federal securities laws and outside directors as defined under applicable federal tax laws. Our Compensation Committee has the authority to construe and interpret the Restated Plan, grant and determine the terms of each award, including the exercise price, the number of shares subject to the award, the exercisability of the award and the form of consideration payable upon exercise of the award, and make all other determinations necessary or advisable for the administration of the Restated Plan.

Eligibility

The Restated Plan provides for the grant of incentive stock options only to our employees and employees of any parent or subsidiary of ours. All awards other than incentive stock options may be granted to our employees, directors, consultants, independent contractors and advisors, and those of any parent or subsidiary of ours. As of March 31, 2020, we had a total of 740 employees and eight non-employee directors who would be eligible to receive awards from the Restated Plan. Our executive officers and directors have an interest in this Proposal insofar as they are eligible to receive awards under the Restated Plan.

Shares Subject to the Restated Plan

If stockholders approve the Restated Plan, then the shares reserved under the Restated Plan will increase by 7,000,000 shares of our common stock, and the cumulative aggregate share authorization under the Restated Plan will increase to 58,573,191 shares, which includes 2,461,644 shares that have been added to the plan pursuant to the “pour over” provision of our 2001 Second Amended and Restated Stock Option Plan (the “2001 Plan,” which plan expired when we adopted the 2007 Plan); this pour over provision allowed us to add to the 2007 Plan any shares that were subject to a stock option granted under our 2001 Plan that were cancelled, expired or terminated. The following table summarizes information regarding awards outstanding and shares of our Common Stock remaining available for grant as of December 31, 2019:

Stock Options Outstanding*	19,264,617
Weighted Average Exercise Price of Stock Options Outstanding	\$3.56
Weighted Average Remaining Term of Stock Options Outstanding	7.22 years
Full Value Awards Outstanding (RSUs and PSUs)*	8,086,039
Shares Available for Grant under the 2007 Plan	2,686,329
Shares Available for Grant under the 2018 Inducement Plan	156,108

*Excludes all PSOs and PSUs paid in lieu of earned annual incentive cash compensation.

The closing price of Glu's common stock on The Nasdaq Global Select Market on April 20, 2020 was \$7.91 per share.

In addition, the following shares will again be available for grant and issuance under our Restated Plan:

- shares surrendered pursuant to an exchange program;
- shares subject to an option or stock appreciation right granted under our Restated Plan that cease to be subject to the option or stock appreciation right for any reason other than exercise of the option or stock appreciation right;
- shares used to satisfy the tax withholding obligations for RSU awards; provided, however, that only shares used to satisfy the minimum tax withholding obligations for RSU awards will again be available for future grant and issuance under the Restated Plan;
- shares subject to an award granted under our Restated Plan that are subsequently forfeited or repurchased by us at the original issue price; and
- shares subject to an award granted under our Restated Plan that otherwise terminates without shares being issued.

Full-Value Awards

A Full Value Award is an award — other than an option or stock appreciation right — that is settled in shares of common stock. The Restated Plan provides that any shares that are subject to awards of options or stock appreciation rights will be counted against the share reserve limit as one share for every one share granted. Additionally, the Restated Plan provides that any shares that are subject to Full Value Awards will be counted against the share reserve limit as 1.32 shares for every one share granted. Paying dividend equivalents in cash in connection with any outstanding award will not be counted against the shares available for issuance under the Restated Plan.

If an award previously granted under the Restated Plan terminates, expires or lapses for any reason, any shares subject to the award may be used again for new grants under the Restated Plan. The Restated Plan also reflects the share counting principle described above when determining the number of shares that may be re-granted after an award expires. If an award terminates, expires or lapses for any reason, any share that again becomes available for future grant shall be added back to the Restated Plan (1) as one share if the share was subject to an option or a stock appreciation right, and (2) as 1.32 shares if such share was subject to a Full Value Award.

Vesting/Acceleration Restrictions

The Restated Plan mandates that awards shall not provide for any vesting prior to at least twelve (12) months from grant. Notwithstanding the foregoing, the Compensation Committee may permit (i) acceleration of vesting of awards in the event of a participant's death, disability or a significant corporate transaction and (ii) vesting of awards on any basis prior to twelve (12) months from grant or any acceleration of vesting of awards representing up to an aggregate of five percent (5%) of the shares reserved and available for grant under the Restated Plan as of the date of its approval by our stockholders. For purposes of awards to non-employee directors, a vesting period will be deemed to be one year if it runs

from the date of one annual meeting of our stockholders to the next annual meeting of our stockholders. Glu may also suspend the vesting of equity grants held by employees upon a reduction in their hours-worked.

Terms of Options

The Restated Plan provides for the grant of nonstatutory stock options, incentive stock options or a combination of each. Incentive stock options may only be granted to our employees and employees of any parent or subsidiary of ours. Subject to adjustment as provided in the Restated Plan, in no event shall more than 16,666,666 shares of our common stock be available for issuance pursuant to the exercise of incentive stock options granted under the Restated Plan.

Each stock option granted under the Restated Plan must be evidenced by a written agreement between us and the optionee specifying the number of shares subject to the stock option and the other terms and conditions of the stock option, consistent with the requirements of the Restated Plan. The exercise price of each stock option may not be less than the fair market value of a share of our common stock on the date of grant (except in connection with the assumption or substitution for another stock option in a manner qualifying under Sections 409A and 424(a) of the Code). In addition, any incentive stock option granted to a person who at the time of grant owns stock possessing more than 10% of the total combined voting power of all classes of our stock or any subsidiary corporation of Glu (a “Ten Percent Stockholder”) must have an exercise price equal to at least 110% of the fair market value of a share of our common stock on the date of grant.

The Restated Plan provides that the stock option exercise price may be paid in cash or by check or, where expressly approved by our Compensation Committee (and to the extent not otherwise set forth in the applicable award agreement) and permitted under applicable law, by means of:

- cancellation of indebtedness;
- surrender of shares of our common stock owned by the optionee having a fair market value not less than the aggregate exercise price of the shares being exercised;
- waiver of compensation due or accrued to the optionee for services rendered or to be rendered to Glu or a parent or subsidiary of Glu;
- a broker-assisted cashless exercise;
- by any combination of the above methods; or
- any other method of payment permitted by applicable law.

Our Compensation Committee may provide for options to be exercised only as they vest or to be immediately exercisable with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. Options may vest based on time or achievement of performance conditions, as is the case with PSOs. In general, our time-based vesting employee stock options vest over a four-year period, with 25% of the underlying shares vesting on the first anniversary of the grant date and the remaining shares vesting in equal monthly installments thereafter for the following three years. However, stock options granted to our employees located in India generally vest over a four-year period, with 25% of the underlying shares vesting on the first anniversary of the grant date and the remaining shares vesting in equal annual installments thereafter for the following three years.

The Restated Plan allows us to grant stock options with a term of up to ten years. Subject to the term of the stock option, a stock option generally will remain exercisable for three months following the optionee’s termination of service, except that if service terminates as a result of an optionee’s death or disability, the stock option generally will remain exercisable for 12 months, and, if an employee optionee’s service is terminated for cause, the stock option will expire on the date of termination. The Compensation Committee, in its discretion, may provide different post-termination exercise periods, but in any event the stock option must be exercised no later than the original expiration of its term.

Unless otherwise determined by our Compensation Committee, stock options are not assignable or transferable by the optionee other than by will or by the laws of descent and distribution.

Terms of Stock Appreciation Rights, or “SARs”

SARs provide for a payment, or payments, in cash or shares of our common stock, to the participant based upon the increase in the fair market value of our common stock on the date of exercise from the stated exercise price. SARs may vest based on time or achievement of performance conditions. Each SAR awarded under the Restated Plan must be evidenced by a written agreement between us and the participant specifying the terms and conditions of the SAR, consistent with the requirements of the Restated Plan.

Our Compensation Committee will determine the terms of each SAR, including the number of shares subject to the SAR, the exercise price and the time or times during which the SAR may be settled, the consideration to be distributed on settlement of the SAR and the effect of the participant’s termination on his or her SAR. The exercise price of SAR may be less than the fair market value of the underlying shares of common stock.

A SAR may be awarded upon satisfaction of performance factors that are set out in advance in the participant’s individual award agreement. If the participant earns the SAR upon the satisfaction of performance factors, then the Compensation Committee will determine the performance factors to be used, as well as the nature, length and starting date of the performance period.

The Restated Plan will still allow us to grant SARs with a term of up to ten years. Except as may be set forth in the participant’s individual award agreement, vesting ceases upon the participant’s termination of service unless determined otherwise by the Compensation Committee.

Terms of RSUs

RSUs represent the right to receive shares of our common stock at a specified date in the future, subject to forfeiture of that right because of termination of the participant’s services to us or the failure to achieve certain performance conditions. If an RSU has not been forfeited, then on the date specified in the RSU agreement, we will deliver to the holder of the RSU whole shares of our common stock, which may be subject to additional restrictions, cash or a combination of our common stock and cash.

Our Compensation Committee will determine the terms of each RSU, including the number of shares subject to the RSU award, the time or times during which the RSU may be settled, the consideration to be distributed on settlement of the RSU and the effect of the participant’s termination on his or her RSU.

An RSU may be granted upon satisfaction of performance factors that are set out in advance in the participant’s individual award agreement, as is the case with PSUs. If the RSU is being earned upon the satisfaction of performance factors, then the Compensation Committee will determine the performance factors to be used, the nature, length and starting date of the performance period and the number of shares that will be subject to the RSU.

Except as may be set forth in the participant’s individual award agreement, vesting ceases upon the participant’s termination of service unless determined otherwise by the Compensation Committee.

Terms of Stock Bonus Awards

Stock bonuses are awards of shares of our common stock, which may be restricted stock or RSUs that are granted as additional compensation for service and/or performance. Payment from the participant is not required for stock bonuses, and stock bonuses are generally not subject to vesting.

Our Compensation Committee will determine the number of shares to be awarded to a participant under a stock bonus award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with Glu or upon satisfaction of performance goals as specified in the participant’s individual award agreement. Prior to the grant of any stock bonus award, our Compensation Committee will determine the performance factors to be used, the nature, length and starting date of the performance period and the number of shares that will be awarded to the participant.

Except as may be set forth in the participant’s individual award agreement, vesting ceases upon the participant’s termination of service unless determined otherwise by the Compensation Committee.

Terms of Performance Shares

Performance shares are awards denominated in shares of our common stock that may be settled in cash or by issuance of those shares only if performance goals established by our Compensation Committee have been achieved. Each performance share will have an initial value equal to the fair market value of a share of our common stock on the date of grant. After the applicable performance period has ended or the applicable metric satisfied, the holder of performance shares will generally be entitled to receive a payout of the number of performance shares earned by the participant, to be determined as a function of the extent to which the corresponding performance factors or other vesting provisions have been achieved.

Before granting any performance share award, our Compensation Committee will determine the terms of each performance share award, including the number of shares subject to the award, the performance factors and performance period that will determine the time and extent to which each award of performance shares will be settled, the consideration to be distributed on settlement of the award and the effect of the participant's termination on his or her performance share award. Before settlement, the Compensation Committee determines the extent to which the performance shares have been earned.

Terms of Performance Options

Performance stock options are stock options that vest and or become exercisable upon achievement of performance goals established by our Compensation Committee. The exercise price of each performance stock option may not be less than the fair market value of a share of our common stock on the date of its grant. After the applicable performance period has ended or the applicable metric satisfied, the holder of a performance stock option may vest in that option or that option may then convert to a time-based vesting stock option.

Before granting any performance stock options, our Compensation Committee will determine the terms of each performance stock option award, including the number of shares subject to the option, the exercise price, the performance factors and performance period that will determine the time and extent to which the performance stock option is earned. The Compensation Committee determines the extent to which the performance stock options have been earned.

Awards to Non-Employee Directors

Non-employee members of our Board of Directors are eligible to receive any type of award offered under the Restated Plan except incentive stock options, which can only be granted to employees. Non-employee directors may not be granted any award or awards denominated in shares that exceed in the aggregate \$600,000 in value (based on the financial accounting value of such awards) in any fiscal year, plus an additional \$600,000 in value for one-time awards to a newly appointed or elected non-employee director. If stock options or SARs are granted to our non-employee directors, their exercise price may not be less than the fair market value of our common stock when the option or SAR is granted. In the event of a corporate transaction, all awards held by our non-employee directors will accelerate fully and become vested and exercisable or settled, as the case may be. Our non-employee director compensation program is described under "Director Compensation" above.

Changes to Capital Structure

If there is any change to the outstanding shares of our common stock without our receipt of consideration (whether through stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in our capital structure), appropriate adjustments will be made to: (a) the maximum number of securities issuable under the Restated Plan, (b) the exercise prices of and number of shares subject to outstanding options and stock appreciation rights, (c) the number of shares subject to RSUs and other outstanding awards, (d) the maximum number of shares that may be issued as incentive stock options, (e) the maximum number of shares that may be awarded to an individual or new employee in a calendar year and (f) the number of shares that are granted as awards to our non-employee directors.

Corporate Transactions; Changes in Control

In the event of certain significant corporate transactions, any or all outstanding awards under the Restated Plan may be assumed or replaced by the successor corporation. In the alternative, the successor corporation may substitute equivalent awards or provide substantially similar consideration to award holders as was provided to stockholders after taking into account the existing provisions of the awards. The successor corporation may also issue, in place of outstanding Glu shares held by the award holder, substantially similar shares or other property subject to repurchase restrictions no less favorable to the holder. In the event such successor corporation refuses to assume, convert, replace or substitute awards, then such awards will expire on such transaction at such time and on such conditions as the Board will determine. However, our Board or Compensation Committee may accelerate the vesting of such awards in connection with certain significant corporate transactions.

In the event of certain significant corporate transactions, the vesting of all awards granted to non-employee members of our Board of Directors will accelerate and such awards will become exercisable (as applicable) in full prior to the consummation of such corporate transaction at such times and on such conditions as the Compensation Committee determines.

A significant corporate transaction means the occurrence of any of the following events: (a) any person becomes the beneficial owner of Glu securities representing 50% or more of the total voting power represented by our then-outstanding voting securities; (b) our consummation of the sale or disposition of all or substantially all of our assets; (c) the consummation of a merger or consolidation of Glu with any other corporation, other than a merger or consolidation which would result in our voting securities outstanding immediately prior to such merger or consolidation continuing to represent 50% of the total voting power represented by the voting securities of Glu or such surviving entity or its parent outstanding immediately after such merger or consolidation.

Restrictions on Repricing

Unless our stockholders first approve such action, the Restated Plan provides that we may not (1) reprice (i.e., reduce the exercise price of) stock options or stock appreciation rights, (2) implement an option exchange or award transfer program, or (3) reduce the exercise price of stock options or stock appreciation rights without the consent of the holder of such options or rights.

Provisions for Foreign Participants

Our Compensation Committee may modify awards granted to participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Restated Plan to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

Duration, Termination and Amendment

Our Compensation Committee may terminate or amend the Restated Plan at any time; provided, however, that the committee will not, without the approval of our stockholders, amend the Restated Plan in any manner that requires stockholder approval. Unless sooner terminated, the Restated Plan will expire on June 4, 2025.

Federal Income Tax Information

The following summary is intended only as a general guide to the current U.S. federal income tax consequences of participation in the Restated Plan and does not attempt to describe all possible federal or other tax consequences of such participation or tax consequences based on particular circumstances. Furthermore, the tax consequences are complex and subject to change, and a taxpayer's particular situation may be such that some variation of the described rules is applicable.

Incentive Stock Options

A participant recognizes no taxable ordinary income as a result of the grant or exercise of an incentive stock option qualifying under Section 422 of the Code. However, the exercise of an incentive stock option may increase the participant's alternative minimum tax liability, if any.

If a participant holds stock acquired through exercise of an incentive stock option for more than two years from the date on which the stock option was granted and more than one year after the date the stock option was exercised for those shares, any gain or loss on a disposition of those shares (a "qualifying disposition") will be a long-term capital gain or loss. Upon such a qualifying disposition, we will not be entitled to any income tax deduction.

Generally, if the participant disposes of the stock before the expiration of either of those holding periods (a "disqualifying disposition"), then at the time of such disqualifying disposition, the participant will realize taxable ordinary income equal to the lesser of (i) the excess of the stock's fair market value on the date of exercise over the exercise price, or (ii) the participant's actual gain, if any, on the purchase and sale. The participant's additional gain or any loss upon the disqualifying disposition will be a capital gain or loss, which will be long-term or short-term depending on whether the stock was held for more than one year. To the extent the participant recognizes ordinary income by reason of a disqualifying disposition, generally we will be entitled to a corresponding income tax deduction in the tax year in which the disqualifying disposition occurs.

Nonstatutory Stock Options

Stock options not designated or qualifying as incentive stock options are nonstatutory stock options having no special tax status. A participant generally recognizes no taxable ordinary income as the result of the grant of such a stock option. Upon exercise of a nonstatutory stock option, the participant normally recognizes ordinary income in the amount of the difference between the stock option exercise price and the fair market value of the shares on the date of purchase. Generally, we will be entitled to an income tax deduction in the tax year in which such ordinary income is recognized by the participant.

Upon the disposition of stock acquired by the exercise of a nonstatutory stock option, any gain or loss, based on the difference between the sale price and the fair market value on the exercise date, will be taxed as capital gain or loss.

Stock Appreciation Rights

A participant recognizes no taxable ordinary income upon the receipt of a SAR. Upon the exercise of a SAR, the participant will recognize ordinary income in an amount equal to the excess of the fair market value of the underlying shares of common stock on the exercise date over the exercise price. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. We generally should be entitled to a deduction equal to the amount of ordinary income recognized by the participant in connection with the exercise of the stock appreciation right, except to the extent such deduction is limited by applicable provisions of the Code.

Restricted Stock Units

A participant recognizes no taxable income upon receipt of an RSU. In general, the participant will recognize ordinary income in the year in which the shares subject to that award vest and are actually issued to the participant in an amount equal to the fair market value of the shares on the date of issuance. Generally, we will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the participant at the time the shares are issued. In general, the deduction will be allowed for the taxable year in which such ordinary income is recognized by the participant.

Stock Bonuses

A participant acquiring restricted stock generally will recognize ordinary income equal to the difference between the fair market value of the shares on the "determination date" (as defined below) and the participant's purchase price, if any. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. The "determination date" is the date on which the participant acquires the shares unless they are subject to a

substantial risk of forfeiture and are not transferable, in which case the determination date is the earlier of (a) the date on which the shares become transferable or (b) the date on which the shares are no longer subject to a substantial risk of forfeiture. If the determination date is after the date on which the participant acquires the shares, the participant may elect, pursuant to Section 83(b) of the Code, to have the date of acquisition be the determination date by filing an election with the Internal Revenue Service no later than 30 days after the date the shares are acquired. Upon the sale of shares acquired pursuant to a restricted stock award, any gain or loss, based on the difference between the sale price and the fair market value on the determination date, will be taxed as a capital gain or loss. Such gain or loss will be long-term or short-term depending on whether the stock was held for more than one year. Generally, we will be entitled to a corresponding income tax deduction in the year in which ordinary income is recognized by the participant.

Performance Shares

A participant generally will recognize no income upon the grant of a performance share award. Upon the settlement of a performance share award, participants normally will recognize ordinary income in the year of receipt in an amount equal to the cash received, if any, and the fair market value of any unrestricted shares received. If the participant is an employee, such ordinary income generally is subject to withholding of income and employment taxes. If the participant receives shares of restricted stock, the participant generally will be taxed in the same manner as described above in “Stock Bonuses.” Upon the sale of any shares received, any gain or loss, based on the difference between the sale price and the fair market value on the “determination date,” will be taxed as a capital gain or loss. We generally should be entitled to a deduction equal to the amount of ordinary income recognized by the participant on the determination date.

New Plan Benefits

The Restated Plan does not provide for set benefits or amounts of awards and we have not approved any awards that are conditioned on shareholder approval of the Restated Plan. However, as discussed in further detail in the section entitled “Director Compensation”, each non-employee director who will remain a non-employee director (excluding Mr. Feder, as discussed above) after the annual stockholders meeting is entitled to receive the lesser in value of (1) stock options and RSUs having an aggregate grant date fair value of \$235,000, with the number of stock options and RSUs allocated to provide an equal value of each equity instrument, or (2) the aggregate grant date fair value of (a) an RSU covering 25,000 shares of our common stock and (b) a stock option to purchase 50,000 shares of our common stock. Such awards will be granted under the Restated Plan. All other future awards to our directors, executive officers, employees and consultants under the Restated Plan are discretionary and cannot be determined at this time.

History of Grants Under the Plan

Pursuant to SEC rules, the following table sets forth the number of shares subject to stock options or restricted stock unit awards granted under the Restated Plan from March 21, 2007 (when the Rested Plan became effective following initial approval by our stockholders) through December 31, 2019.

Name and Position	Number of Underlying Awards ⁽¹⁾
Nick Earl <i>President and Chief Executive Officer</i>	7,063,165
Eric R. Ludwig, <i>Executive Vice President, Chief Operating Officer and Chief Financial Officer</i>	6,623,052
Chris Akhavan <i>Senior Vice President, Business & Corporate Development</i>	3,146,930
Becky Ann Hughes <i>Senior Vice President, Revenue</i>	1,204,522
Scott J. Leichtner <i>VP, General Counsel and Secretary</i>	1,739,563
All current executive officers (5 persons)	19,777,232
All current non-employee directors (9 persons)	6,527,166
All employees (excluding current executive officers)	29,666,262

(1) These share numbers do not include shares underlying options that were granted but were subsequently canceled or expired unexercised.

EQUITY COMPENSATION PLAN INFORMATION

Equity Compensation Plan Table

The following table sets forth certain information, as of December 31, 2019, concerning securities authorized for issuance under all of our equity compensation plans: our 2001 Plan, which terminated when we adopted the 2007 Plan, 2007 Employee Stock Purchase Plan (the “ESPP”) and 2008 Inducement Plan, which terminated on March 13, 2018 and was replaced by the 2018 Inducement Plan, effective April 2, 2018. The ESPP contained an “evergreen” provision, pursuant to which on January 1st of each year we automatically added 1% of our shares of common stock outstanding on the preceding December 31st to the shares reserved for issuance under the ESPP; this evergreen provision expired after the increase on January 1, 2015. In addition, pursuant to a “pour over” provision in our 2007 Plan, options that were cancelled, expired or terminated under the 2001 Plan were added to the number of shares reserved for issuance under our 2007 Plan.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights ⁽¹⁾ (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by security holders	28,916,074	\$ 4.00	5,473,466 ⁽²⁾
Equity compensation plans not approved by security holders	3,321,904 ⁽³⁾	\$ 2.77	156,108 ⁽⁴⁾
Total	32,237,978		5,629,574

(1) The weighted average exercise price does not take into account the shares subject to outstanding RSUs and PSUs, which have no exercise price.

- (2) Represents 2,686,329 shares available for issuance under our the 2007 Plan, which plan permits the grant of incentive and non-qualified stock options (including PSOs), stock appreciation rights, restricted stock, stock awards and RSUs; and 2,787,137 shares available for issuance under the ESPP.
- (3) Represents outstanding options under the 2008 Inducement Plan and 2018 Inducement Plan.
- (4) Represents shares available for issuance under the 2018 Inducement Plan, under which we may only grant non-qualified stock options and RSUs.

Equity Compensation Plans Not Approved by Securityholders

In March 2008, in connection with our acquisition of Superscape Group plc, our Board of Directors adopted the 2008 Inducement Plan to augment the shares available under our then existing 2007 Plan. We have not sought stockholder approval for the 2008 Inducement Plan. As such, awards under the 2008 Inducement Plan were granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with us. The 2008 Inducement Plan, which had a ten-year term and expired on March 13, 2018, did not require the approval of our stockholders. We initially reserved 600,000 shares of our common stock for issuance under the 2008 Inducement Plan. On December 28, 2009, the Compensation Committee of our Board of Directors increased the number of shares reserved for issuance under the 2008 Inducement Plan by 819,245 shares. We used all of the 1,250,000 shares then available for a stock option grant to Niccolo de Masi in connection with his appointment as our new President and Chief Executive Officer.

Furthermore, in connection with the acquisitions of Griptonite, Inc. and Blammo Games Inc., the Compensation Committee increased the number of shares reserved for issuance under our 2008 Inducement Plan by 1,050,000 shares to grant stock options to certain of the new non-executive officer employees of Griptonite and Blammo. In November 2012, the Compensation Committee further increased the number of shares available for issuance by an additional 300,000 shares, all of which we used to award a stock option grant to our newly hired President of Studios. In May 2013, the Compensation Committee amended the 2008 Inducement Plan to increase the number of shares available for grant by 200,000 shares in order to issue shares to new hires, including Chris Akhavan, our current Senior Vice President, Business & Corporate Development who was at that time hired as our President of Publishing. In December 2015, the Compensation Committee approved an increase in the number of authorized shares of common stock available for grant by 1,000,000 shares in connection with grants made to Nick Earl upon his hiring as President of Global Studios.

Finally, in November 2016, the Compensation Committee approved an increase in the number of authorized shares of common stock available for grant by 6,000,000 to grant stock options and RSUs to employees of Crowdstar Inc. (“Crowdstar”) in connection with our acquisition of Crowdstar. Accordingly, as of December 31, 2019, we had reserved a total of 9,969,245 shares of our common stock for grant and issuance under the 2008 Inducement Plan since its inception, of which, 3,080,991 shares were subject to outstanding stock options and RSUs and no shares remained available for issuance. On March 13, 2018, the 2008 Inducement Plan expired and was replaced by the 2018 Inducement Plan effective April 2, 2018. As of December 31, 2019, we had reserved a total of 400,000 shares under the 2018 Inducement Plan, of which 240,913 shares were subject to outstanding stock options and 156,108 shares remained available for issuance.

The 2018 Inducement Plan, which replaced the 2008 Inducement Plan, permits us to grant non-qualified stock options and RSUs. We may grant non-qualified stock options under the 2018 Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of our Board of Directors. The fair value of our common stock is determined by the last sale price of our stock on The Nasdaq Global Market on the date of determination. If any option granted under the 2018 Inducement Plan expires or terminates for any reason without being exercised in full, the unexercised shares will be available for grant under the 2018 Inducement Plan. All outstanding awards are subject to adjustment for any future stock dividends, splits, combinations, or other changes in capitalization as described in the 2008 and 2018 Inducement Plans. If we were acquired and the acquiring corporation did not assume or replace the awards granted under the 2008 or 2018 Inducement Plans, or if we were to liquidate or dissolve, all outstanding awards will expire on such terms as our Board of Directors determines.

The Board recommends that stockholders vote “FOR” the proposal to amend and restate our 2007 Equity Incentive Plan.

**PROPOSAL NO. 3 –
ADVISORY VOTE ON EXECUTIVE COMPENSATION**

In accordance with Section 14A of the Exchange Act, we are including in this proxy statement the opportunity for our stockholders to vote to approve, on a non-binding, advisory basis, the compensation of our Named Executive Officers as disclosed in this proxy statement. This non-binding advisory vote is commonly referred to as a “say on pay” vote. At our 2017 Annual Meeting of Stockholders, our stockholders approved advisory voting on our executive compensation on an annual basis. Accordingly, we are requesting that stockholders vote, in an advisory capacity, on our Named Executive Officer compensation as disclosed in the “Compensation Discussion and Analysis” and “Executive Compensation” sections of this proxy statement at the Annual Meeting.

We strongly encourage stockholders to review the information contained in the “Compensation Discussion and Analysis” and “Executive Compensation” sections of this proxy statement, which discuss how our executive compensation policies and procedures implement our compensation philosophy and contain tabular information and narrative discussion about the compensation of our Named Executive Officers. The Compensation Committee and the Board believe that these policies and procedures are effective in implementing our compensation philosophy and in achieving its goals.

While the results of this advisory vote are not binding, the Compensation Committee will consider the outcome of the vote in deciding whether to take any action as a result of the vote and when making future compensation decisions for our Named Executive Officers.

**The Board recommends that stockholders vote “FOR” the
following advisory resolution:**

RESOLVED, that the stockholders approve, on an advisory basis, the compensation of our named executive officers as described in the “Compensation Discussion and Analysis” and “Executive Compensation” sections and the accompanying tabular and narrative disclosures in this proxy statement pursuant to the compensation disclosure rules of the SEC.

**PROPOSAL NO. 4 –
RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM,
PRICEWATERHOUSECOOPERS LLP, FOR THE FISCAL YEAR
ENDING DECEMBER 31, 2020**

Our Audit Committee has selected, and is submitting for ratification by the stockholders its selection of, PricewaterhouseCoopers LLP (“PwC”) to serve as our independent registered public accounting firm for the year ending December 31, 2020. Although stockholder approval of this proposal is not required by law, the Audit Committee has determined that it is desirable to request that stockholders ratify this selection. Notwithstanding the selection, the Audit Committee, in its discretion, may appoint a different independent registered public accounting firm at any time, if the Audit Committee feels that such a change would be in the best interests of us and our stockholders. If our stockholders do not approve this Proposal No. 4, the Audit Committee will reconsider the selection of PwC as our independent registered public accounting firm for 2020.

The following table sets forth the aggregate fees and related expenses for which we were billed by PwC for professional services provided by them during 2019 and 2018. The Audit Committee considered the provision of the services corresponding to these fees, and the Audit Committee believes that the provision of these services is compatible with PwC maintaining its independence. The Audit Committee’s pre-approval policies and procedures require prior approval by the Audit Committee of each engagement of PwC to perform services. All of the professional services listed below were approved in accordance with these policies.

	2019	2018
Audit fees	\$ 1,589,750	\$ 1,562,976
Audit-related fees	—	—
Tax fees	92,400	74,700
All other	2,700	2,700
Total	\$ 1,684,850	\$ 1,640,376

Audit Fees

These fees consist of amounts for professional services rendered in connection with the audit of our financial statements, reviews of the interim financial statements included in our quarterly reports on Form 10-Q, for attestation services related to compliance with the Sarbanes-Oxley Act of 2002, and statutory and regulatory filings or engagements.

Audit-Related Fees

These fees consist of amounts for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements that are not reported under “Audit Fees.”

Tax Fees

These fees consist of professional services rendered for tax advice, planning and compliance (domestic and international). These services include the preparation and review of income tax returns and international returns and assistance regarding transfer pricing; federal, state and international tax compliance; acquisitions; and general international tax planning.

All Other Fees

In both years, these fees consist of amounts paid for an annual subscription to PwC’s online accounting and auditing research tool.

For more information about PwC, please see the “Audit Committee Report” contained in this proxy statement.

Representatives of PwC are expected to attend the Annual Meeting. These representatives will be given the opportunity to make a statement if they desire to do so, and they will be available to respond to appropriate questions.

The Board recommends that stockholders vote “FOR” the ratification of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2020.

AUDIT COMMITTEE REPORT

The Audit Committee of the Board is composed of Dr. Ball and Messrs. Nada and Smith, each of whom is an independent director, as independence for audit committee members is defined in The Nasdaq Stock Market’s listing standards.

The members of the Audit Committee assist the Board in fulfilling its responsibilities relating to the oversight of the accounting, financial reporting, internal controls, financial practices and audit activities of Glu and our subsidiaries.

In fulfilling its oversight role, the Audit Committee has reviewed and discussed our audited financial statements with management and our independent registered public accounting firm. The Audit Committee met eight times during 2019, including meetings with our independent registered public accounting firm, PricewaterhouseCoopers LLP, to review our quarterly and annual results. It is not the duty of the Audit Committee to plan or conduct audits or to determine that the financial statements are complete and accurate and conform to generally accepted accounting principles. Management is responsible for the preparation, presentation and integrity of our financial statements, accounting and financial reporting principles, internal controls and procedures designed to ensure compliance with accounting standards, applicable laws and regulations. PricewaterhouseCoopers LLP is responsible for expressing an opinion on the conformity of our audited financial statements to generally accepted accounting principles.

The Audit Committee discussed with our independent registered public accounting firm the matters required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant’s communications with the Audit Committee concerning independence. The Audit Committee has received from the independent registered public accounting firm the written disclosures and the letter required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm’s communications with the Audit Committee concerning independence and has discussed with the independent registered public accounting firm that firm’s independence.

Based upon the Audit Committee’s review and discussions referred to above, the Audit Committee recommended to the Board that our audited consolidated financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 28, 2020.

Submitted by the Audit Committee of the Board,

Eric R. Ball (Chair)
Hany M. Nada
Benjamin T. Smith, IV

TRANSACTION OF OTHER BUSINESS

At the date of this proxy statement, the Board knows of no other business that will be conducted at the 2020 Annual Meeting of Stockholders, other than as described in this proxy statement. If any other matter or matters are properly brought before the Annual Meeting, or any adjournment or postponement of the Annual Meeting, the persons named in the accompanying form of proxy intend to vote the proxy on such matters in accordance with their best judgment.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC's rules allow us to incorporate by reference into this proxy statement the information we file with the SEC. This means that we can disclose important information to you by referring you to another document without restating that information in this document. Any information incorporated by reference into this proxy statement is considered to be part of this proxy statement from the date we file that document. Any reports filed by us with the SEC after the date of this proxy statement will automatically update and, where applicable, supersede any information contained in this proxy statement or incorporated by reference in this proxy statement.

APPENDIX A

GLU MOBILE INC.

Amended & Restated 2007 Equity Incentive Plan

(As Amended through ~~June 6, 2019~~, 2020)

1. PURPOSE. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents and Subsidiaries that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 27.

2. SHARES SUBJECT TO THE PLAN.

2.1 Number of Shares Available. Subject to Sections 2.5 and 22 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan is ~~Fifty-One Million Five Hundred Seventy-Three Thousand One Hundred Ninety-One (51,573,191)~~ Fifty-Eight Million Five Hundred Seventy-Three Thousand One Hundred Ninety-One (58,573,191) Shares plus (i) any reserved shares not issued or subject to outstanding grants under the Company's 2001 Stock Option Plan (the "**Prior Plan**") on the Effective Date (as defined below), (ii) shares that are subject to stock options granted under the Prior Plan that cease to be subject to such stock options after the Effective Date and (iii) shares issued under the Prior Plan before or after the Effective Date pursuant to the exercise of stock options that are, after the Effective Date, forfeited or shares issued under the Prior Plan that are repurchased by the Company at the original issue price.

2.2 Lapsed, Returned Awards. Shares subject to Awards, and Shares issued upon exercise of Awards, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (i) are subject to issuance upon exercise of an Option or SAR granted under this Plan but which cease to be subject to the Option or SAR for any reason other than exercise of the Option or SAR; (ii) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price; (iii) are surrendered pursuant to an Exchange Program; (iv) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued; or (v) are used to satisfy applicable tax withholding obligations with respect to all types of Awards, except for Options and SARs. Any Award other than an Option or a SAR shall reduce the number of Shares available for issuance by 1.32 Shares. With respect to SARs and Options, the gross number of Shares subject to a SAR or Option will cease to be available under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Option or SAR will not become available for future grant or sale under the Plan. Shares used to satisfy up to the minimum statutory tax withholding obligations related to any Award other than an Option or SAR will become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. To the extent that any Award other than an Option or a SAR is forfeited, repurchased or terminates without Shares being issued pursuant to this Section 2.2, Shares may again be available for issuance under this Plan at the rate of 1.32 Shares for every such Share returned to the Plan.

2.3 Minimum Share Reserve. At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Awards granted under this Plan and all other outstanding but unvested Awards granted under this Plan.

2.4 Limitations. No more than Sixteen Million Six Hundred Sixty-Six Thousand Sixty-Six (16,666,666) Shares shall be issued pursuant to the exercise of ISOs.

2.5 Adjustment of Shares. If the number of outstanding Shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, then (a) the number of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1, (b) the Exercise Prices of and number of Shares subject to outstanding Options and SARs, (c) the number of Shares subject to other outstanding Awards, (d) the maximum number of shares that may be issued as ISOs set forth in Section 2.4 and (e) the number of Shares that are granted as Awards to Outside Directors as set forth in Section 12, shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

2.6. Limitation on Outside Director Awards. No Outside Director may be granted any Awards or Awards denominated in shares that exceed in the aggregate six hundred thousand dollars (\$600,000) in value (such value computed as of the date of grant in accordance with applicable financial accounting rules) in any calendar year, plus an additional aggregate six hundred thousand dollars (\$600,000) in value for one-time awards to a newly appointed or elected Outside Director. The foregoing limit shall not apply to any Award made pursuant to deferred compensation arrangements in lieu of all or a portion of cash retainers.

2.7. Vesting/Acceleration Restriction. No portion of any Award shall vest prior to the first anniversary of the date of grant of the Award; provided, that vesting may accelerate in connection with death, Disability, or a Corporate Transaction. For purposes of Awards to Outside Directors, a vesting period will be deemed to be one year if it runs from the date of one annual meeting of the

Company's stockholders to the next annual meeting of the Company's stockholders provided that such annual meetings are at least 50 weeks apart. Notwithstanding the foregoing, up to 5% of the Shares authorized for grant pursuant to Section 2.1 may be granted with a minimum vesting schedule of less than one year.

3. ELIGIBILITY. ISOs may be granted only to Employees. All other Awards may be granted to Employees, Consultants, Directors and Outside Directors of the Company or any Parent or Subsidiary of the Company; provided such Consultants, Directors and Outside Directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction.

4. ADMINISTRATION.

4.1 Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan, except, however, the Board shall establish the terms for the grant of an Award to Outside Directors. The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been earned;

(l) determine the terms and conditions of any, and to institute any Exchange Program;

(m) reduce or waive any criteria with respect to Performance Factors;

(n) adjust Performance Factors to take into account changes in law and accounting or tax rules as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships provided that such adjustments are consistent with the regulations promulgated under Section 162(m) of the Code with respect to persons whose compensation is subject to Section 162(m) of the Code (to the extent necessary for purposes of Section 162(m) of the Code); and

(o) make all other determinations necessary or advisable for the administration of this Plan.

4.2 Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award shall be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination shall be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement shall be submitted by the Participant or Company to the Committee for review. The resolution of such a dispute by the Committee shall be final and binding on the Company and the Participant. The Committee may delegate to one or more executive officers the authority to review and resolve disputes with respect to Awards held by Participants who are not Insiders, and such resolution shall be final and binding on the Company and the Participant.

4.3 [intentionally left blank]

4.4 Awards subject to Company Clawback or Recoupment Policy. All Awards granted after the adoption of the Company's Compensation Recovery Policy (the "**Policy**") and subject to applicable law, shall be subject to clawback or recoupment pursuant to the Policy or any other compensation clawback or recoupment policy that may be adopted by the Board (or its Compensation Committee) from time to time thereafter or required by law during the term of Participant's employment or other service with the Company that is applicable to executive officers, employees, directors or other service providers of the Company, ~~and which such policy may~~ in addition to any other remedies available under such policy and applicable law, ~~may~~ require the cancellation of outstanding Awards and the recoupment of any gains realized with respect to Awards.

5. OPTIONS. The Committee may grant Options to Participants and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("**ISOs**") or Nonqualified Stock Options ("**NQSOs**"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may be exercised, and all other terms and conditions of the Option, subject to the following:

5.1 Option Grant. Each Option granted under this Plan will identify the Option as an ISO or an NQSO. An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each Option; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2 Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement and a copy of this Plan will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3 Exercise Period. Options may be exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who, at the time the ISO is granted, directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary of the Company ("**Ten Percent Shareholder**") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4 Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (i) the Exercise Price of any Option (both ISOs and NQOs) will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant and (ii) the Exercise Price of any ISO granted to a Ten Percent Shareholder will not be less than one hundred ten percent (110%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 11. Notwithstanding the foregoing, NQSOs may be granted with an exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant solely pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code.

5.5 Method of Exercise. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.5 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6 Termination. The exercise of an Option will be subject to the following (except as may be otherwise provided in an Award Agreement):

(a) If the Participant is Terminated for any reason except for Cause or the Participant's death or Disability, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable by the Participant on the Termination Date no later than three (3) months after the Termination Date (or such shorter time period or longer time

period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond three (3) months after the Termination Date deemed to be an NQSO), but in any event no later than the expiration date of the Options.

(b) If the Participant is Terminated because of the Participant's death (or the Participant dies within three (3) months after a Termination other than for Cause or because of the Participant's Disability), then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant's legal representative, or authorized assignee, no later than twelve (12) months after the Termination Date (or such shorter time period not less than six (6) months or longer time period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond (a) three (3) months after the Termination Date when the Termination is for any reason other than the Participant's death, or (b) twelve (12) months after the Termination Date when the Termination is for the Participant's death, deemed to be an NQSO), but in any event no later than the expiration date of the Options.

(c) If the Participant is Terminated because of the Participant's Disability, then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant (or the Participant's legal representative or authorized assignee) no later than twelve (12) months after the Termination Date (with any exercise beyond (a) three (3) months after the Termination Date when the Termination is for a Disability that is not a "permanent and total disability" as defined in Section 22(e)(3) of the Code, or (b) twelve (12) months after the Termination Date when the Termination is for a Disability that is a "permanent and total disability" as defined in Section 22(e)(3) of the Code, deemed to be exercise of an NQSO), but in any event no later than the expiration date of the Options.

(d) If the Participant is terminated for Cause, then Participant's Options shall expire on such Participant's Termination Date, or at such later time and on such conditions as are determined by the Committee, but in any no event later than the expiration date of the Options.

5.7 Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8 Limitations on ISOs. With respect to Awards granted as ISOs, to the extent that the aggregate Fair Market Value of the Shares with respect to which such ISOs are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars (\$100,000), such Options will be treated as NQSOs. For purposes of this Section 5.8, ISOs will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISOs, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9 Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. Subject to Section 18 of this Plan, by written notice to affected Participants, the Committee may reduce the Exercise Price of outstanding Options without the consent of such Participants; provided, however, that the Exercise Price may not be reduced below the Fair Market Value on the date the action is taken to reduce the Exercise Price.

5.10 No Disqualification. Notwithstanding any other provision in this Plan, no term of this Plan relating to ISOs will be interpreted, amended or altered, nor will any discretion or authority granted under this Plan be exercised, so as to disqualify this Plan under Section 422 of the Code or, without the consent of the Participant affected, to disqualify any ISO under Section 422 of the Code.

6. RESTRICTED STOCK AWARDS.

6.1 Awards of Restricted Stock. A Restricted Stock Award is an offer by the Company to sell to a Participant Shares that are subject to restrictions ("***Restricted Stock***"). The Committee will determine to whom an offer will be made, the number of Shares the Participant may purchase, the Purchase Price, the restrictions under which the Shares will be subject and all other terms and conditions of the Restricted Stock Award, subject to the Plan.

6.2 Restricted Stock Purchase Agreement. All purchases under a Restricted Stock Award will be evidenced by an Award Agreement. A Participant accepts a Restricted Stock Award by signing and delivering to the Company an Award Agreement with full payment of the Purchase Price, within thirty (30) days from the date the Award Agreement was delivered to the Participant. If the Participant does not accept such Award within thirty (30) days, then the offer of such Restricted Stock Award will terminate, unless the Committee determines otherwise.

6.3 Purchase Price. The Purchase Price for a Restricted Stock Award will be determined by the Committee and may be less than Fair Market Value on the date the Restricted Stock Award is granted. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement.

6.4 Terms of Restricted Stock Awards. Restricted Stock Awards will be subject to such restrictions as the Committee may impose or are required by law. These restrictions may be based on completion of a specified number of years of service with the Company or upon completion of Performance Factors, if any, during any Performance Period as set out in advance in the Participant's Award Agreement. Prior to the grant of a Restricted Stock Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.5 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

7. STOCK BONUS AWARDS.

7.1 Awards of Stock Bonuses. A Stock Bonus Award is an award to an eligible person of Shares (which may consist of Restricted Stock or Restricted Stock Units) for services to be rendered or for past services already rendered to the Company or any Parent or Subsidiary. All Stock Bonus Awards shall be made pursuant to an Award Agreement. No payment from Participant will be required for Shares awarded pursuant to a Stock Bonus Award.

7.2 Terms of Stock Bonus Awards. The Committee will determine the number of Shares to be awarded to the Participant under a Stock Bonus Award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with the Company or upon satisfaction of performance goals based on Performance Factors during any Performance Period as set out in advance in the Participant's Stock Bonus Agreement. Prior to the grant of any Stock Bonus Award the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Stock Bonus Award; (b) select from among the Performance Factors to be used to measure performance goals; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Stock Bonus Awards that are subject to different Performance Periods and different performance goals and other criteria.

7.3 Form of Payment to Participant. Payment may be made in the form of cash, whole Shares, or a combination thereof, based on the Fair Market Value of the Shares earned under a Stock Bonus Award on the date of payment.

7.4 Termination of Participation. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

8. STOCK APPRECIATION RIGHTS.

8.1 Awards of SARs. A Stock Appreciation Right ("**SAR**") is an award to a Participant that may be settled in cash, or Shares (which may consist of Restricted Stock), having a value equal to (a) the difference between the Fair Market Value on the date of exercise over the Exercise Price multiplied by (b) the number of Shares with respect to which the SAR is being settled (subject to any maximum number of Shares that may be issuable as specified in an Award Agreement). All SARs shall be made pursuant to an Award Agreement.

8.2 Terms of SARs. The Committee will determine the terms of each SAR including, without limitation: (a) the number of Shares subject to the SAR; (b) the Exercise Price and the time or times during which the SAR may be settled; (c) the consideration to be distributed on settlement of the SAR; and (d) the effect of the Participant's Termination on each SAR. The Exercise Price of the SAR will be determined by the Committee when the SAR is granted, and may not be less than Fair Market Value. A SAR may be awarded upon satisfaction of Performance Factors, if any, during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the SAR is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each SAR; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to SARs that are subject to different Performance Factors and other criteria.

8.3 Exercise Period and Expiration Date. A SAR will be exercisable within the times or upon the occurrence of events determined by the Committee and set forth in the Award Agreement governing such SAR. The SAR Agreement shall set forth the expiration date; provided that no SAR will be exercisable after the expiration of ten (10) years from the date the SAR is granted. The Committee may also provide for SARs to become exercisable at one time or from time to time, periodically or otherwise (including, without limitation, upon the attainment during a Performance Period of performance goals based on Performance Factors), in such number of Shares or percentage of the Shares subject to the SAR as the Committee determines. Except as may be set forth in the

Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee). Notwithstanding the foregoing, the rules of Section 5.6 also will apply to SARs.

8.4 Form of Settlement. Upon exercise of a SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying (i) the difference between the Fair Market Value of a Share on the date of exercise over the Exercise Price; times (ii) the number of Shares with respect to which the SAR is exercised. At the discretion of the Committee, the payment from the Company for the SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

9. RESTRICTED STOCK UNITS.

9.1 Awards of Restricted Stock Units. A Restricted Stock Unit ("**RSU**") is an award to a Participant covering a number of Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). All RSUs shall be made pursuant to an Award Agreement.

9.2 Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; and (c) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each RSU. An RSU may be awarded upon satisfaction of such Performance Factors (if any) during any Performance Period as are set out in advance in the Participant's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

9.3 Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both.

9.4 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

10. PERFORMANCE SHARES.

10.1 Awards of Performance Shares. A Performance Share Award is an award to a Participant denominated in Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). Grants of Performance Shares shall be made pursuant to an Award Agreement.

10.2 Terms of Performance Shares. The Committee will determine, and each Award Agreement shall set forth, the terms of each award of Performance Shares including, without limitation: (a) the number of Shares deemed subject to such Award; (b) the Performance Factors and Performance Period that shall determine the time and extent to which each award of Performance Shares shall be settled; (c) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each award of Performance Shares. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period; (y) select from among the Performance Factors to be used; and (z) determine the number of Shares deemed subject to the award of Performance Shares. Prior to settlement the Committee shall determine the extent to which Performance Shares have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Shares that are subject to different Performance Periods and different performance goals and other criteria.

10.3 Value, Earning and Timing of Performance Shares. Each Performance Share will have an initial value equal to the Fair Market Value of a Share on the date of grant. After the applicable Performance Period has ended, the holder of Performance Shares will be entitled to receive a payout of the number of Performance Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding Performance Factors or other vesting provisions have been achieved. The Committee, in its sole discretion, may pay earned Performance Shares in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Shares at the close of the applicable Performance Period) or in a combination thereof.

10.4 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

11. PAYMENT FOR SHARE PURCHASES.

Payment from Participant for Shares purchased pursuant to this Plan may be made in cash or by check or, where expressly approved for the Participant by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Participant;

(b) by surrender of shares of the Company held by the Participant that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Participant for services rendered or to be rendered to the Company or a Parent or Subsidiary of the Company;

(d) by consideration received by the Company pursuant to a broker-assisted and/or same day sale (or other) cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

12. GRANTS TO OUTSIDE DIRECTORS.

12.1 Types of Awards. Outside Directors are eligible to receive any type of Award offered under this Plan except ISOs. Awards pursuant to this Section 12 may be automatically made pursuant to policy adopted by the Board, or made from time to time as determined in the discretion of the Board.

12.2 Eligibility. Awards pursuant to this Section 12 shall be granted only to Outside Directors. An Outside Director who is elected or re-elected as a member of the Board will be eligible to receive an Award under this Section 12.

12.3 Vesting, Exercisability and Settlement. Except as set forth in Section 21, Awards shall vest, become exercisable and be settled as determined by the Board. With respect to Options and SARs, the exercise price granted to Outside Directors shall not be less than the Fair Market Value of the Shares at the time that such Option or SAR is granted.

13. WITHHOLDING TAXES.

13.1 Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan, the Company may require the Participant to remit to the Company an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements.

13.2 Stock Withholding. The Committee, in its sole discretion and pursuant to such procedures as it may specify from time to time, may require or permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld, including withholding from the proceeds of the sale of otherwise deliverable Shares acquired pursuant to an Award either through a voluntary sale or through a mandatory sale arranged by the Company, or (iii) delivering to the Company already-owned Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld. The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

14. **TRANSFERABILITY.** Unless determined otherwise by the Committee, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, such Award will contain such additional terms and conditions as the Committee deems appropriate. Notwithstanding the foregoing, in no event shall the Committee institute an Award Transfer Program without first receiving the consent of the Company's stockholders. All Awards shall be exercisable: (i) during the Participant's lifetime only by (A) the Participant, or (B) the Participant's guardian or legal representative; and (ii) after the Participant's death, by the legal representative of the Participant's heirs or legatees.

15. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES.

15.1 Voting and Dividends. No Participant will have any of the rights of a shareholder with respect to any Shares until the Shares are issued to the Participant. After Shares are issued to the Participant, the Participant will be a shareholder and have all the rights of a shareholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Participant's Purchase Price or Exercise Price, as the case may be, pursuant to Section 15.2. The Committee may not provide for the current payment of dividends with respect to any shares of Common Stock subject to an outstanding Award granted

under the Plan (or portion thereof) that has not vested. For any such Award, the Committee may provide only for the accrual of dividends that will not be payable to the Participant unless and until, and only to the extent that, such Award vests. No dividends shall be paid on Options or Stock Appreciation Rights.

15.2 Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a “**Right of Repurchase**”) a portion of any or all Unvested Shares held by a Participant following such Participant’s Termination at any time within ninety (90) days after the later of the Participant’s Termination Date and the date the Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant’s Purchase Price or Exercise Price, as the case may be.

16. **CERTIFICATES**. All certificates for Shares or other securities delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted.

17. **ESCROW; PLEDGE OF SHARES**. To enforce any restrictions on a Participant’s Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Participant’s obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant’s Shares or other collateral. In connection with any pledge of the Shares, the Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

18. **REPRICING; EXCHANGE AND BUYOUT OF AWARDS**. Provided that stockholder approval is first obtained, the Committee (a) may reprice (i.e., reduce the Exercise Price) of) Options or SARs; (b) may, at any time or from time to time, implement an Exchange Program; or (c) may reduce the Exercise Price of outstanding Options or SARs without the consent of affected Participants by a written notice to them.

19. **SECURITIES LAW AND OTHER REGULATORY COMPLIANCE**. An Award will not be effective unless such Award is in compliance with all applicable federal and state securities laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any state securities laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

20. **NO OBLIGATION TO EMPLOY**. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent or Subsidiary of the Company or limit in any way the right of the Company or any Parent or Subsidiary of the Company to terminate Participant’s employment or other relationship at any time.

21. **CORPORATE TRANSACTIONS**.

21.1 Assumption or Replacement of Awards by Successor. In the event of a Corporate Transaction any or all outstanding Awards may be assumed or replaced by the successor corporation, which assumption or replacement shall be binding on all Participants. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Participants as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company subject to repurchase and held by the Participant, substantially similar shares or other property subject to repurchase restrictions no less favorable to the Participant. In the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, then notwithstanding any other provision in this Plan to the contrary, such Awards will expire on such transaction at such time and on such conditions as the Board will determine; the Board (or, the Committee, if so designated by the Board) may, in

its sole discretion, accelerate the vesting of such Awards in connection with such a Corporate Transaction in which the successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards. In addition, in the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, the Committee will notify the Participant in writing or electronically that such Award will be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the expiration of such period. Awards need not be treated similarly in a Corporate Transaction.

Notwithstanding anything to the contrary in this Section 21.1, the Committee, in its sole discretion, may grant Awards that provide for acceleration upon a Corporate Transaction or in other events in the specific Award Agreements.

21.2 Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the Purchase Price or the Exercise Price, as the case may be, and the number and nature of Shares issuable upon exercise or settlement of any such Award will be adjusted appropriately pursuant to Section 424(a) of the Code).

21.3 Outside Directors' Awards. Notwithstanding any provision to the contrary herein, in the event of a Corporate Transaction, the vesting of all Awards granted to Outside Directors shall accelerate and such Awards shall become exercisable (as applicable) in full prior to the consummation of such event at such times and on such conditions as the Committee determines.

22. ADOPTION AND SHAREHOLDER APPROVAL. This Plan shall be submitted for the approval of the Company's shareholders, consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board.

23. TERM OF PLAN. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate on June 4, 2025. This Plan and all Awards granted hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

24. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the shareholders of the Company, amend this Plan in any manner that requires such shareholder approval; provided further, that a Participant's Award shall be governed by the version of this Plan then in effect at the time such Award was granted.

25. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the shareholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

26. INSIDER TRADING POLICY. Each Participant who receives an Award shall comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company.

27. DEFINITIONS. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

"Award" means any award under the Plan, including any Option, Restricted Stock, Stock Bonus, Stock Appreciation Right, Restricted Stock Unit or award of Performance Shares.

"Award Agreement" means, with respect to each Award, the written or electronic agreement between the Company and the Participant setting forth the terms and conditions of the Award, which shall be in substantially a form (which need not be the same for each Participant) that the Committee has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

"Award Transfer Program" means any program instituted by the Committee that would permit Participants the opportunity to transfer for value any outstanding Awards to a financial institution or other person or entity approved by the Committee. A transfer for "value" shall not be deemed to occur under this Plan where an Award is transferred by a Participant for bona fide estate planning purposes to a trust or other testamentary vehicle approved by the Committee.

"Board" means the Board of Directors of the Company.

“**Cause**” means (a) the commission of an act of theft, embezzlement, fraud, dishonesty, (b) a breach of fiduciary duty to the Company or a Parent or Subsidiary, or (c) a failure to materially perform the customary duties of Employee’s employment.

“**Code**” means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

“**Committee**” means the Compensation Committee of the Board or those persons to whom administration of the Plan, or part of the Plan, has been delegated as permitted by law.

“**Company**” means Glu Mobile Inc., or any successor corporation.

“**Consultant**” means any person, including an advisor or independent contractor, engaged by the Company or a Parent or Subsidiary to render services to such entity.

“**Corporate Transaction**” means the occurrence of any of the following events: (i) any “person” (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the “beneficial owner” (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company’s then-outstanding voting securities; (ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company’s assets; (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation. Notwithstanding the foregoing, to the extent that any amount constituting deferred compensation (as defined in Section 409A of the Code) would become payable under this Plan by reason of a Corporate Transaction, such amount shall become payable only if the event constituting a Corporate Transaction would also qualify as a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each as defined within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and IRS guidance that has been promulgated or may be promulgated thereunder from time to time.

“**Director**” means a member of the Board.

“**Disability**” means total and permanent disability as defined in Section 22(e)(3) of the Code, provided, however, that except with respect to Awards granted as ISOs, the Committee in its discretion may determine whether a total and permanent disability exists in accordance with non-discriminatory and uniform standards adopted by the Committee from time to time, whether temporary or permanent, partial or total, as determined by the Committee.

“**Effective Date**” means the date of the underwritten initial public offering of the Company’s Common Stock pursuant to a registration statement is declared effective by the SEC.

“**Employee**” means any person, including Officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director’s fee by the Company will be sufficient to constitute “employment” by the Company.

“**Exchange Act**” means the United States Securities Exchange Act of 1934, as amended.

“**Exercise Price**” means the price at which a holder of an Option or SAR may purchase the Shares issuable upon exercise of an Option or SAR.

“**Exchange Program**” means a program pursuant to which (i) outstanding Awards are surrendered, cancelled or exchanged for cash, the same type of Award or a different Award (or combination thereof) or (ii) Participants would have the opportunity to participate in an Award Transfer Program.

“**Fair Market Value**” means, as of any date, the value of a share of the Company’s Common Stock determined as follows:

(a) if such Common Stock is then quoted on the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market (collectively, the “**Nasdaq Market**”), its closing price on the Nasdaq Market on the date of determination, or if there are no sales for such date, then the last preceding business day on which there were sales, as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(b) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(c) if such Common Stock is publicly traded but is neither quoted on the Nasdaq Market nor listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable;

(d) in the case of an Option or SAR made on the Effective Date, the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act; or

(e) if none of the foregoing is applicable, by the Board or the Committee in good faith.

"Insider" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

"Option" means an award of an option to purchase Shares pursuant to Section 5.

"Outside Director" means a Director who is not an Employee of the Company or any Parent or Subsidiary.

"Parent" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"Participant" means an Employee, Consultant or Director (including Outside Directors) who receives an Award under this Plan.

"Performance Factors" means the factors selected by the Committee, which may include, but are not limited to the, the following measures (whether or not in comparison to other peer companies) to determine whether the performance goals established by the Committee and applicable to Awards have been satisfied:

- Net revenue and/or net revenue growth;
- Earnings per share and/or earnings per share growth;
- Earnings before income taxes and amortization and/or earnings before income taxes and amortization growth;
- Operating income and/or operating income growth;
- Net income and/or net income growth;
- Total stockholder return and/or total stockholder return growth;
- Return on equity;
- Operating cash flow return on income;
- Adjusted operating cash flow return on income;
- Economic value added;
- Individual business objectives; and
- Company specific operational metrics.

"Performance Period" means the period of service determined by the Committee, not to exceed five (5) years, during which years of service or performance is to be measured for the Award.

"Performance Share" means an Award granted pursuant to Section 10 of the Plan.

"Plan" means this Glu Mobile Inc. 2007 Equity Incentive Plan.

"Purchase Price" means the price to be paid for Shares acquired under the Plan, other than Shares acquired upon exercise of an Option or SAR.

"Restricted Stock Award" means an award of Shares pursuant to Section 6 of the Plan, or issued pursuant to the early exercise of an Option.

"Restricted Stock Unit" means an Award granted pursuant to Section 9 of the Plan.

"SEC" means the United States Securities and Exchange Commission.

"Securities Act" means the United States Securities Act of 1933, as amended.

“Shares” means shares of the Company’s Common Stock, as adjusted pursuant to Sections 2 and 21, and any successor security.

“Stock Appreciation Right” means an Award granted pursuant to Section 8 of the Plan.

“Stock Bonus” means an Award granted pursuant to Section 7 of the Plan.

“Subsidiary” means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

“Termination” or **“Terminated”** means, for purposes of this Plan with respect to a Participant, that the Participant has for any reason ceased to provide services as an employee, officer, director, consultant, independent contractor or advisor to the Company or a Parent or Subsidiary of the Company. An employee will not be deemed to have ceased to provide services in the case of (i) sick leave, (ii) military leave, or (iii) any other leave of absence approved by the Committee; provided, that such leave is for a period of not more than 90 days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute or unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any employee on an approved leave of absence or upon a reduction in hours worked (for illustrative purposes only, a change in schedule from that of full-time to part-time), the Committee may make such provisions respecting suspension of vesting of the Award while on leave from the employ of the Company or a Parent or Subsidiary of the Company or during such change in working hours as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. The Committee will have sole discretion to determine whether a Participant has ceased to provide services and the effective date on which the Participant ceased to provide services (the **“Termination Date”**).

“Unvested Shares” means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

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

Form 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number: 001-33368

Glu Mobile Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of
Incorporation or Organization)

875 Howard Street, Suite 100

San Francisco, California

(Address of Principal Executive Offices)

91-2143667

(IRS Employer
Identification No.)

94103

(Zip Code)

(415) 800-6100

(Registrant's Telephone Number, Including Area Code)

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

<u>Title of Each Class</u>	<u>Trading Symbol</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, par value \$0.0001 per share	GLUU	Nasdaq Global Select Market

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

None
(Title of Class)

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 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 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 ☒

Non-accelerated filer ☐

Accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2019, the last business day of the registrant's most recently completed second fiscal quarter, based upon the closing price of such stock on such date as reported by The Nasdaq Global Select Market, was approximately \$879,331,800. Shares of common stock held by each executive officer and director of the registrant and by each person who owns 10% or more of the registrant's 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 other purposes.

The number of outstanding shares of the registrant's common stock as of February 18, 2020 was 150,031,695.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for registrant's 2020 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days after registrant's fiscal year ended December 31, 2019 are incorporated by reference into Part III of this Annual Report on Form 10-K.

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Forward-Looking Statements

The information in this Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Such statements are based upon current expectations that involve risks and uncertainties. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. For example, words such as “may,” “will,” “should,” “estimates,” “predicts,” “potential,” “continue,” “strategy,” “believes,” “anticipates,” “plans,” “expects,” “intends” and similar expressions are intended to identify forward-looking statements. Our actual results and the timing of certain events may differ significantly from the results discussed in the forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed elsewhere in this report, particularly in the section titled “Risk Factors,” and the risks discussed in our other Securities and Exchange Commission, or SEC, filings. We undertake no obligation to update the forward-looking statements after the date of this report, except as required by law.

PART I

Item 1. *Business*

General

Glu Mobile develops, publishes and markets a portfolio of free-to-play mobile games designed to appeal to a broad cross section of users who download and make purchases within our games through direct-to-consumer digital storefronts, such as the Apple App Store, Google Play Store, and others. Free-to-play games are games that a player can download and play for free, but which allow players to access a variety of additional content and features for a fee and to engage with various advertisements and offers that generate revenue for us. We have a portfolio of compelling games based on our own intellectual property such as *Cooking Dash*, *Covet Fashion*, *Deer Hunter*, *Design Home*, *Diner DASH Adventures* and *QuizUp*, as well as games based on or significantly incorporating third party licensed brands including *Kim Kardashian: Hollywood*, *MLB Tap Sports Baseball* and *Restaurant Dash with Gordon Ramsay*. We are headquartered in San Francisco, California, with another U.S. office in Foster City, California, and international locations in Toronto, Canada and Hyderabad, India.

We were incorporated in Nevada in May 2001 as Cyent Studios, Inc. and changed our name to Sorrent, Inc. later that year. In November 2001, we incorporated a wholly owned subsidiary in California, and, in December 2001, we merged the Nevada corporation into this California subsidiary to form Sorrent, Inc., a California corporation. In May 2005, we changed our name to Glu Mobile Inc. In November 2006, Glu Mobile Inc. reincorporated in the state of Delaware. In March 2007, we completed our initial public offering and our common stock is traded on the Nasdaq Global Select Market under the symbol “GLUU.” Except where the context requires otherwise, in this Annual Report on Form 10-K, references to “Company,” “Glu,” “Glu Mobile,” “we,” “us” and “our” refer to Glu Mobile Inc., and where appropriate, its subsidiaries.

Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other reports, and amendments to these reports, required of public companies with the SEC. The SEC also maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. We make available free of charge on the Investor Relations section of our corporate website all of the reports we file with the SEC as soon as reasonably practicable after they are filed. Our internet website is located at www.glu.com and our Investor Relations website is located at www.glu.com/investors. The information on our website is not incorporated into this report, unless otherwise expressly stated. **Copies of our Annual Report on Form 10-K for the year ended December 31, 2019 may also be obtained, without charge, by contacting Investor Relations, Glu Mobile Inc., 875 Howard Street, Suite 100, San Francisco, California 94103 or by emailing IR@glu.com.**

Strategy and Business Developments

Our Strategy

Our goal is to become the leading developer and publisher of free-to-play mobile games. Our strategy for achieving this goal is comprised of three parts:

- Building Growth Games and Maximizing the Value of Catalog Games;
- Attracting and Fostering Creative Leaders, Including Potentially by Selective Acquisitions;; and
- Cultivating Highly Creative Environments.

Building Growth Games and Maximizing the Value of Catalog Games

The first prong of our strategy is to build growth games for smartphones and tablets as well as maximize the value we derive from our catalog games. Growth games are titles that we continue to update with additional content and features and which we expect to grow revenue year over year. We believe a key component of driving revenue growth year over year from a growth game is the inclusion of community features which may involve users competing with each other, forming clubs or groups to cooperate in completing goals, or contributing their own original content to the game, as well as other live operations efforts such as running regular in-game events, offering virtual currency discounts and optimizing our merchandising strategies. *Covet Fashion*, *Design Home* and *MLB Tap Sports Baseball* are our existing growth games. We currently publish titles primarily in four genres: lifestyle, casual, mid-core, and sports and outdoors. We believe these are genres in which we have already established a leadership position, are otherwise aligned with our strengths or are conducive to the establishment of a strong growth game.

We continue to update some of our catalog titles with additional content and features, whereas on others we expend little to no investment in terms of updates and enhancements. Catalog games differ from growth games in that our focus is to reduce and potentially reverse their year over year revenue declines; to the extent that we succeed in our efforts to grow annual revenue from a catalog game and expect such title's revenues to continue to grow on an annual basis, we would then consider such catalog game to be a growth game. *Cooking Dash*, *Deer Hunter 2018*, *Kim Kardashian: Hollywood* and *Restaurant Dash with Gordon Ramsay* are examples of our existing catalog games.

While we have generally designed our games to incorporate social features that enhance the user's gameplay experience, as part of our product strategy we are emphasizing adding new social and community-based features, systems, and modes into our growth games. For example, *Covet Fashion* allows users to join "Fashion Houses" with other users and then borrow each others' clothes, receive advice on their looks, chat and work together to unlock additional rewards in special style challenges, and our *Tap Sports Baseball* franchise allow players to challenge their friends to head-to-head matchups and to join clubs that compete in daily events against other clubs as well as includes an improved media-driven chat system. We intend to continue to innovate to further enhance the user experience in our growth games and potentially broaden their audience. For example, we plan to introduce e-commerce functionality to *Design Home* during 2020 which is designed to deepen the engagement level of our players with the game. In addition, we recently announced that we are exploring the extension of *Design Home* and *Tap Sports Baseball* to the browser.

We are continuing to emphasize developing new titles based on original intellectual property. Reflecting this strategy, revenue from games based on our own intellectual property increased from 65.7% of our total revenues in 2018 to 69.9% of our total revenues in 2019. However, we also seek to selectively license and utilize key brands within our titles if we believe this will maximize their consumer appeal and revenue potential. For example, in 2018, we added content from Major League Baseball, or MLB, for the first time in our Tap Sports Baseball franchise, and in 2018 and 2019 we added new and improved existing club events and released new legendary players, which helped us to meaningfully grow revenue from this franchise year over year. In addition, in 2020, we intend to publish *Disney Sorcerer's Arena* in collaboration with Disney Consumer Products and Interactive Media. We also closely work with our celebrity and brand licensors to engage their social media audiences and build games that will resonate with their unique

fan bases. In particular, *Kim Kardashian: Hollywood* utilizes transmedia storytelling, leveraging Ms. Kardashian West's built-in social media fan base to drive installs and awareness of the game, and then attempts to surprise and delight those fans with real-world events and other game content based on her life. Our goal is for the game content to become entwined with Ms. Kardashian West's persona and social media presence, and to otherwise enhance interaction with her fans. We also leverage the strength of well-known brands and licensors to provide users with more realistic experiences, such as the case with *MLB Tap Sports Baseball 2019* which features all MLB clubs and uniforms and current and former MLB players; we intend to further enhance the authenticity of this title by including all 30 real major league stadiums in *MLB Tap Sports Baseball 2020*. We also work to build and nurture social communities in and around the games themselves, creating a new vehicle for strong, personal engagement with the brand or celebrity's fan base. Continuing to drive installs and awareness of our games through our licensing efforts requires that we continue to partner with brands, celebrities and social influencers that resonate with potential players of our games. Partnering with desirable licensing partners and renewing our existing licenses with our most successful partners requires that we continue to develop successful games based on licensed content and are able to compete with other mobile gaming companies on financial and other terms in signing such partners. We also plan to continue introducing third-party licensed brands, properties and personalities into our games as additional licensed content, for cameo appearances or for limited time events in order to drive awareness and monetization.

For us to continue driving installs and awareness of our games and to improve monetization and retention of our players, we must ensure that each of our games has compelling gameplay and a deep meta game that motivates users to continue to play our games for months or even years. In addition, we must regularly update our games with compelling new content, deliver socio-competitive features like tournaments, contests, player-versus-player gameplay and live events, and build and nurture communities around our franchises both in-game and holistically via community features such as dedicated social channels. We have also made significant investments in our proprietary analytics and revenue technology infrastructure. With our enhanced analytics capabilities, we intend to devote resources towards segmenting and learning more about the players of each of our franchises and further monetizing our highest spending and most engaged players. We aim to connect our analytics and revenue technology infrastructure to multiple elements of our business – from marketing to merchandising – in order to improve player retention and monetization.

We also plan to continue monitoring the successful aspects of our games to drive downloads and enhance monetization and retention as part of our product strategy, whether by optimizing advertising revenue within each title, securing additional compelling licensing arrangements, building enhanced and more complex core gameplay, adding deep meta game features or through enhancing our live operation. Optimizing advertising revenue within our games requires us to continue taking advantage of positive trends in the mobile advertising space, particularly as brands continue to migrate budgets from web to mobile.

Attracting and Fostering Creative Leaders, Including Potentially by Selective Acquisitions

The second prong of our strategy is to attract, cultivate and retain proven creative leaders who will develop and update our growth and catalog games. Each creative leader is responsible for the long-term planning of his or her titles and to identify and invest in long-term opportunities and concepts that have the potential to become growth games. Our talent model is to attract the industry's finest and provide them with world-class infrastructure, tools, funding and the support to create hit games. We have made, and plan to make, significant investment in our creative leaders.

We have worked with our creative leaders to instill financial discipline and operational excellence in our organization by revamping our prototyping and greenlight processes. Prior to developing a new game, a creative leader works with a small team to rapidly prototype new ideas that have the potential to become growth games. We expect our creative leaders to fail fast and to either continue to iterate on a game concept or to move on to rapidly prototyping a new concept. Once the creative leader and his or her team have sufficiently iterated on their concept and are satisfied that their game has the potential to be a growth game, the creative leader will submit a playable version of the game for greenlighting. If the game is greenlit, we then commit larger investments in terms of headcount and resources.

In addition, we recently announced that we intend to increase our focus on potentially acquiring companies or individual game teams in order to complement our existing portfolio and augment our roster of creative leaders.

Cultivating Highly Creative Environments

We believe a key part of building growth games and attracting and cultivating creative leaders is providing them with highly creative environments that are optimal for creating hit games. In December 2017, we moved into our new headquarters in San Francisco that were designed to foster collaboration among our game teams and focus the company around our core values and creative-led vision. Creative environments that support our creative leaders and other game development personnel are also needed to attract the level of talent that will support our growth and catalog games. We not only consolidated our studio footprint by moving into our creative center in San Francisco and relocating our Burlingame studio to our San Francisco headquarters, but have also significantly increased our investment in our low-cost, scaled center in Hyderabad, India which provides live operations for some of our catalog games, insourced art, quality assurance and low cost repeatable sales, marketing and general and administrative functions. As part of this consolidation, in the last several years, we closed or sold development studios in Beijing, China; Bellevue, Washington; Portland, Oregon; San Mateo and Long Beach, California; and Moscow, Russia.

Business Developments

Since January 1, 2019, we have taken the following actions to support our business:

- We continued to focus our efforts on developing and publishing games for smartphones and tablet devices. Our significant achievements related to these efforts include the following:
 - We generated total revenue of \$411.4 million for the year ended December 31, 2019, a 12.2% increase compared to total revenue of \$366.6 million for the year ended December 31, 2018.
 - In December 2019, we had approximately 2.9 million daily active users and 15.6 million monthly active users of our games on our primary distribution platforms, including Apple's App Store and the Google Play Store.
 - As of December 31, 2019, we had approximately 2.0 billion cumulative installs of our games on our primary distribution platforms, including approximately 20.7 million installs during the fourth quarter of 2019.
- We grew revenues on an annual basis from each of our growth games, as follows:
 - Revenues from *Design Home* increased from \$145.7 million in 2018 to \$173.6 million in 2019;
 - Revenues from *Covet Fashion* increased from \$49.0 million in 2018 to \$62.5 million in 2019; and
 - Revenues from our *Tap Sports Baseball* franchise increased from \$69.1 million in 2018 to \$86.2 million in 2019.
- In March 2019, we announced that we had extended our existing agreements with MLB and Major League Baseball Players Association, or the MLBPA, through 2024.
- In August 2019, we acqui-hired a game development team in Orlando, Florida that is developing a fishing game that is currently in beta testing in the Philippines and which we expect to globally launch in 2021.

Across the globe our industry is experiencing a trend that hit titles generally remain higher in the top grossing charts for longer. We believe this is due to the continued specialization and investment of teams and companies in their hit titles, and the live, social nature of certain games. Our strategy and the measures we have implemented to support our business position us to take advantage of these trends, as evidenced by the continued strength and year-over-year growth of our *Design Home* and *Covet Fashion* titles and the *Tap Sports Baseball* franchise. We plan to continue to regularly update and otherwise support our growth games in order to ensure that those games monetize and retain users for even longer periods of time. In addition, we plan to continue to invest in our creative leaders and the creative environments in which they and their teams work to increase our likelihood of creating significant hit growth games in 2020 and beyond.

Our Products

We develop and publish a portfolio of mobile games designed to appeal to a broad cross section of the users of smartphones and tablet devices. Our portfolio of growth and catalog games is spread across the following genres:

- *Lifestyle*
 - *Design Home*, which launched in November 2016 and was acquired as part of our acquisition of Crowdstar, has become our most successful growth game. *Design Home* allows users to participate in daily Design Challenges in which they style three dimensional spaces with real, high-end furniture and décor. We introduced key updates for *Design Home* in the last several years, including elite events for elder players, improved series challenges, language localization in German, French and Spanish, and meta game functionality. We are planning further updates for *Design Home* in 2020, including the introduction of e-commerce functionality.
 - *Covet Fashion*, which we acquired as part of our acquisition of Crowdstar, is a top grossing fashion title that was our third largest revenue contributor during 2019. *Covet Fashion* features continually changing content and daily Style Challenges to help drive engagement and monetization of its users. During 2019, we introduced our new prop shop feature, which provided additional opportunities for our users to express their creativity.
- *Casual*
 - *Diner DASH Adventures*, launched in June 2019, is the latest title in our Dash franchise. *Diner DASH Adventures* offers world decoration, a deep story, and an innovative consolidation of different Dash time-management styles.
 - *Kim Kardashian: Hollywood* is a narrative role playing game featuring Kim Kardashian-West's likeness, voice and creative influence as she guides players on their journey to success in Hollywood. We globally launched *Kim Kardashian: Hollywood* in June 2014.
 - *Cooking Dash* was launched in June 2015 and had its last significant content release in 2019. We utilized this release to help drive awareness and direct traffic to the launch of *Diner DASH Adventures*. While we are no longer developing new content for *Cooking Dash*, we have transitioned into a cadence of live operations that takes full advantage of the wealth of existing content and we believe will maintain the title's position as one of our top catalog games into 2020.
 - *Restaurant Dash with Gordon Ramsay*, launched in June 2016, utilizes Gordon Ramsay's personality to guide users to become a restaurateur in the image of Mr. Ramsay. We are no longer developing content updates for this title, but have streamlined our live operations in an effort to maximize revenue and reduce costs from this title.
- *Mid-core*
 - *Disney Sorcerer's Arena* is a strategy role playing game featuring dozens of characters from across the Disney and Pixar film franchises. *Disney Sorcerer's Arena* is currently available in limited beta territories and we expect to launch the title worldwide in the first quarter of 2020.
- *Sports and Outdoors*
 - *MLB Tap Sports Baseball 2019*, which launched in March 2019, was the sixth installment in our popular Tap Sports Baseball franchise in which we partnered with the MLB, MLBPA and Major League Baseball Players Alumni Association, or the MLBPA, to include real-world current and former baseball stars from each of the MLB's 30 teams. The *MLB Tap Sports* franchise was our second largest revenue contributor and the highest ranked baseball title in the Apple App Store's U.S. iPhone top grossing games rankings during 2019. We expect to launch *MLB Tap Sports Baseball 2020* in March 2020 in more than 100 additional territories with significant new features, including all 30 real major league stadiums and a new home run derby mode.

- *Deer Hunter 2018*, originally launched in September 2015 as *Deer Hunter 2016*, remained as one of our top action titles during 2019. We released a new Hunting Tournament feature in 2018 along with three major updates to this title in 2016 and 2017, which helped slow the annual revenue declines from this title.
- *WWE Universe* was released in May 2019 and features hundreds of Raw, SmackDown, NXT, and classic WWE Superstars.
- We expect to add to our portfolio of sports and action titles through the worldwide release of the next iteration of our *Deer Hunter* franchise in the second half of 2020 as well as a fishing title in 2021.

We believe that our games consistently have high production values, are visually appealing and have engaging core gameplay. These characteristics have typically helped to drive installs and awareness of our games and resulted in highly positive consumer reviews. The majority of our games have been featured on the Apple and Google storefronts when they were commercially released, which we believe is the result of us being a good partner of Apple and Google.

We have continued to improve monetization in our games, with our most popular games remaining successful for longer periods of time. The longevity of our most successful games derives from strong core gameplay, deep meta game features, regular content updates and social and community features, such as the ability to join clans or clubs, tournaments, player-versus-player gameplay and live events.

Our games historically have had “thick clients” due to their high production values and, in some cases, 3-D graphics. A thick client game means that our games have a large file size, often 200 megabytes or more, that resides on the player’s device. Because of limitations set by Apple, which at most only allow applications that are less than 200 megabytes, to be downloaded over a carrier’s wireless network, players must download our iOS games that exceed 200 megabytes via a wireless Internet (Wi-Fi) connection.

Our Revenue

We generate the majority of our revenue through in-application purchases (“in-app-purchases”), with the balance of our revenue primarily generated by offers and in-game advertising. When we incorporate licensed content into our games, we share a portion of our revenue with the licensors featured in these titles.

In-App Purchases

Although users can download and play our games free of charge, they can purchase virtual currency, virtual items, other virtual benefits like time and energy or subscriptions of any of these categories, to enhance their gameplay experience – we refer to these as “in-app purchases” or “micro-transactions.” Some of the benefits that players receive from their in-app purchases include:

- *Play Longer Through Better Equipment* – We generally design our games to become significantly more challenging as the player advances through the game. For a game like *Dash Adventures*, players can purchase higher-quality ingredients and various boosts that can help them complete increasingly difficult levels more easily.
- *Play Longer Through Energy Replenishment* – We design some of our games, such as *Deer Hunter 2018* and *Kim Kardashian: Hollywood*, to have short playing sessions, the duration of which are limited by the energy available for each session. Players of *Deer Hunter 2018* and *Kim Kardashian: Hollywood* can use their virtual currency to purchase items that will replenish their energy and enable them to extend their gameplay session.
- *Accelerate Game Progress* – Although some players are content to slowly “grind” their way through progressing in a game, others are willing to purchase items to accelerate their progression. For example, our *Tap Sports Baseball* titles enable players to spend their virtual currency to upgrade their roster of players and boost the effectiveness of such players, thus allowing the player to more quickly assemble a winning team.

- *Customization* – Our games generally enable players to express themselves by customizing their character, the world the character inhabits or a room. For example, *Covet Fashion* and *Design Home* each allow users to customize the look of their avatar or room, respectively, by purchasing clothing or home design elements. While in *Covet Fashion* users own a clothing or accessory item indefinitely after it is purchased and can use it in multiple events, *Design Home* limits the player to five uses of any purchased design element.

We sell virtual currency to consumers at various prices ranging from \$0.99 to \$299.99 depending on the available storefront pricing (adjusted for local currencies for sales to players in foreign countries) with the significant majority of player purchases occurring at the lower price points. The digital storefronts generally share with us 70% of the consumers' payments for in-app purchases; we do not have any special agreement or arrangement with respect to pricing or terms with any of the digital storefronts. Consumers may also acquire virtual currency, other virtual items or virtual benefits through gameplay or by completing offers, as described below.

Offers and In-Game Advertising

In addition to in-app purchases of virtual currency, we also monetize our games through offers and in-game advertising. Optimizing advertising revenue within our games requires us to continue taking advantage of positive trends in the mobile advertising industry, particularly as brands continue to migrate budgets from web to mobile. Offers enable users to acquire virtual currency without paying cash but by instead taking specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. We work with third parties to provide these offers to players of our games, and we receive a payment from the third party offer provider based on consumer response to these offers. We also work with third party advertising aggregators who embed advertising, such as incented video ads, ads appearing within the game between content transitions and as pop-up ads; the aggregators typically pay us based on the number of impressions, which is the number of times an advertisement is shown to a player, or conversions, which is the number of times players complete an advertiser's desired action. In addition, from time to time we work directly with other application developers to include advertising for their applications in our games, and the developers pay us based on either the number of impressions in our games or the number of users who download the developer's application.

Licensed Content

Following the success of *Kim Kardashian: Hollywood* and games incorporating licensed third-party brands and properties, like our *Tap Sports Baseball* franchise, we increased our licensing efforts, both in terms of securing licenses to develop games based upon or significantly featuring celebrities and other third-party intellectual property and for cameo appearances or to otherwise incorporate third-party intellectual property into our games. However, we have more recently begun to emphasize developing new titles based on original intellectual property. In 2019, 2018, and 2017, games based on our own intellectual property accounted for approximately 69.9%, 65.7%, and 59.1% of our revenue, respectively. The increase in the percentage of revenues derived from original intellectual property from 2017 to 2019 was due primarily to the success of *Design Home*, *Covet Fashion*, and *Diner DASH Adventures*, as well as the continued strength of some of our catalog games. We expect to launch three new titles in 2020, *Disney Sorcerer's Arena*, *Originals* and the next iteration of our *Deer Hunter* franchise, one of which will include third-party licensed content. We intend to continue to selectively license and utilize key brands within our titles if we believe this will maximize their consumer appeal and revenue potential.

For games based on or significantly incorporating licensed brands, properties or other content, we share a portion of our revenue with the respective licensors. The average royalty rate that we paid on games based on licensed content (such as *Kim Kardashian: Hollywood* and *Restaurant Dash with Gordon Ramsay*) or significantly incorporating licensed content (such as *MLB Tap Sports Baseball 2019*) was approximately 20.5% of gross revenue in 2019, 20.2% in 2018, and 18.2% in 2017. However, the individual royalty rates that we pay can be meaningfully above or below the average based on a variety of factors, such as the strength of the licensed brand, our development and porting obligations, and the platforms on which we are permitted to distribute the licensed content.

Sales, Marketing and Distribution

We market, sell and distribute our games primarily through direct-to-consumer digital storefronts, such as Apple's App Store and the Google Play Store. In addition to publishing our smartphone games on direct-to-consumer digital storefronts, we also publish some of our titles on other platforms, such as the Mac App Store and Facebook. In addition, we recently announced that we are exploring the extension of *Design Home* and *Tap Sports Baseball* to the browser. The significant majority of our smartphone revenue has historically been derived from Apple's iOS platform, which accounted for approximately 60.8%, 63.1%, and 63.0% of our total revenue in 2019, 2018, and 2017, respectively. We generated the majority of these iOS-related revenue from the Apple App Store, which represented 54.4%, 54.7%, and 54.2% of our total revenue in 2019, 2018, and 2017, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store. In addition, we generated approximately 39.1%, 36.6%, and 36.0% of our total revenue in 2019, 2018, and 2017, respectively, from the Android platform. We generated the majority of our Android-related revenue through the Google Play Store, which represented 33.5%, 31.3%, and 30.3% of our total revenue in 2019, 2018, and 2017, respectively. We generated the balance of our Android-related revenue from other platforms that distribute apps that run the Android operating system (e.g., the Amazon App Store) and through offers and advertisements in games distributed through other Android platforms. No other customer or digital storefront accounted for more than 10% of our total revenue in 2019, 2018, and 2017.

As part of our efforts to successfully market our games on the direct-to-consumer digital storefronts, we attempt to educate the storefront owners about our title roadmap and seek to have our games featured or otherwise prominently placed within the storefront. We believe that the featuring or prominent placement of our games facilitates organic user discovery and is likely to result in our games achieving a greater degree of commercial success. We believe that a number of factors may influence the featuring or placement of a game, including:

- the perceived attractiveness and quality of the title, brand, or licensed intellectual property;
- the level of critical or commercial success of the game or of other games previously introduced by a publisher;
- incorporation of the storefront owner's latest technology in the publisher's title;
- how strong the consumer experience is on all of the devices that discover titles using any given digital storefront;
- the publisher's relationship with the applicable storefront owner and future pipeline of quality titles for it; and
- the current market share of the publisher.

The majority of our games have been featured on the Apple and Google storefronts when they were commercially released, which we believe is in part due to our efforts to be a consistently good partner with Apple and Google. In addition to our efforts to secure prominent featuring or placement for our games, we have also undertaken a number of marketing initiatives designed to acquire players and increase downloads of our games and increase sales of virtual currency, including:

- using social networking websites, such as Facebook and Twitter, to build a base of fans and followers to whom we can quickly and easily provide information about our games;
- paying third parties, including advertising networks, social media channels and social influencers, to advertise or incentivize consumers to download our games through offers or recommendations;
- using "push" notifications to alert users of sales on virtual currency or items in our games; and
- cross-promoting our games through banner advertisements in our other games, as well as advertising our games in our competitors' games;

In addition, certain of our games featuring celebrities or other licensed content like *Kim Kardashian: Hollywood* generate significant attention through word of mouth, particularly through social media channels. We look to leverage existing social media presences in order to increase the virality and commercial success of our games. Furthermore, social-based methods for promoting our games include in-game events where players compete with and against each other, in-game social promotions and regular content updates, including in-game content that leverages real world events, such as holiday promotions or current events in the life of our celebrity partners.

We have sought to deepen player engagement by fostering a sense of community in our games. As part of these efforts, we have organized player councils for certain of our games where we have invited some of our most dedicated players to special events to engage with the development teams and share their feedback about our games. For example, we held our second CovetCon event in Chicago in 2019 where 60 VIP players purchased tickets to attend a multi-day event focusing on *Covet Fashion* – bringing the best aspects of Covet to life, including creativity, fashion, and community.

Development Studios

Our creative leaders have primary responsibility for overseeing game development for our growth and catalog games. The internal studios that develop our games are located in San Francisco and Foster City, California; and Toronto, Canada. In addition, as part of our restructuring activities in 2016 and 2017 and the acquisition of *QuizUp* from Plain Vanilla in December 2016, we moved certain of our catalog games to our Hyderabad, India location to run live operations and produce content updates for these games.

Our studios are generally supported by central services personnel in our San Francisco, California headquarters who provide expertise with respect to areas such as user experience, software development kit (SDK) development, analytics and product marketing, with each studio leveraging these services to varying degrees.

Our game development process involves a significant amount of creativity, particularly with respect to developing original intellectual property franchises or games in which we license intellectual property from celebrities, Hollywood studios or other owners of brands, properties and other content. Creative and technical studio expertise is necessary to design games that appeal to players who typically play in short sessions and to develop games that work well on mobile phones and tablets with their inherent limitations, such as small screen sizes and control buttons. During 2020, we plan to hire additional game development personnel and invest in technical studio expertise to drive content and features in our growth games and to prototype ideas that we believe can become hit growth games.

Despite our efforts to reduce our geographical footprint and consolidate studios, our development personnel are located in four cities in three different countries, which results in certain inherent complexities. To address these issues, we instituted our Creative Leadership Summit program. The Creative Leadership Summit is designed to increase interaction among our studio teams, including having international studio team members regularly spend time in our U.S. studios. The goal of this program is to ensure that we increase the uniformity, quality and commercial success of our games. In addition, we believe that our strategy of focusing our development efforts on building and maintaining growth games will help ensure more efficient use of our talent and resources across our studios and further promote the sharing of expertise and best practices.

Product Development

Since the markets for our products are characterized by rapid technological change, particularly in the technical capabilities of mobile phones and tablets, and changing end-user preferences, continuous investment is required to innovate and publish new games, regularly update our games, and modify existing games for distribution on new platforms.

We have continued to utilize measures designed to ensure that we publish and launch games that have a greater likelihood of being commercially successful, while identifying earlier in the development process game concepts and designs that are unlikely to produce hits. Prior to developing a new game, a creative leader works with a small team to

rapidly prototype new ideas that have the potential to become growth games. We expect our creative leaders to fail fast and to either continue to iterate on a game concept or to move on to rapidly prototyping a new concept. Once the creative leader and his or her team have sufficiently iterated on their concept and are satisfied that their game has the potential to be a growth game, the creative leader will submit a playable version of the game for greenlighting. If the game is greenlit, we then commit larger investments in terms of headcount and resources.

In addition, we plan to continue holding detailed post-mortems for all products to review and analyze the positive and negative results from each new game launch. These are in addition to our Glu University training sessions where we formally share best practices and learnings amongst the leadership of all functions of our global studios.

We use third-party development tools to create our games, including a game development engine licensed from Unity Technologies to create most of our newest games and our games in development. In addition, we rely on our own servers and third-party infrastructure to operate our games and to maintain and provide our analytics data. In particular, a significant portion of game traffic is hosted by Amazon Web Services (“AWS”), which provides us server redundancy by using multiple locations on various distinct power grids, and we expect to continue utilizing AWS for a significant portion of our hosting services for the foreseeable future.

Furthermore, we have made significant investments in building out a personalization and experimentation engine that seamlessly integrates with our proprietary analytics system, advertisement related activities, and game environment. We believe this new capability will greatly enhance our ability to segment and personalize our players’ in-game experience with a focus on further monetizing our highest spending and most engaged players. We aim to connect the data, insights and knowledge gained from our analytics and monetization techniques to every element of our business – from marketing to merchandising – in order to improve player retention and monetization.

Seasonality

Many new smartphones and tablets are released in, or shortly before, the fourth calendar quarter to coincide with the holiday shopping season. Because many players download our games soon after they purchase or receive their new devices, we generally experience seasonal sales increases based on the holiday selling period. Although we believe that the majority of this holiday impact occurs during the fourth quarter, some of this seasonality also occurs for us in our first calendar quarter due to some lag between device purchases and game purchases. However, the impact of this seasonality on our operating results is significantly affected by our title release schedule. For example, we have historically released each year’s new version of our *Tap Sports Baseball* franchise late in the first quarter, which has resulted in revenues from this title peaking in the second or third quarter, with declining revenues in the fourth quarter and the first quarter of the following year leading up to the launch of the next version of the title. In addition, companies’ advertising budgets are generally strongest during the fourth quarter and decline significantly in the first quarter of the following year, which affects the revenue we derive from advertisements and offers in our games. Conversely, our cost per install and cost per ad view also increase in the fourth quarter, since demand for marketing is higher during the holiday season.

Competition

Developing, distributing and selling mobile games is a highly competitive business, characterized by frequent product introductions and rapidly emerging new platforms, technologies and storefronts. For players, we compete primarily on the basis of game quality, brand and customer reviews. We compete for space on user’s smartphones and tablet devices in terms of the number of applications on their device and the amount of storage consumed by such applications. We also compete more generally for the time, attention and discretionary spending of users of smartphones and tablet devices who are spending ever-increasing amounts of time on social media, messaging and music, movie and television streaming applications, personal computer and console games, sports and the Internet. We compete for promotional and digital storefront placement based on our relationship with the digital storefront owner, historical performance, game quality, perception of sales potential, customer reviews and relationships with licensors of brands and other content. For content licensors, we compete based on royalty and other economic terms, historical financial performance of prior licensed content titles, perceptions of development quality, speed of execution, distribution breadth and relationships with storefront owners. We also compete for experienced and talented employees.

We compete with a continually increasing number of companies, including Activision (the parent company of King Digital Entertainment), DeNA, Disney, Electronic Arts (EA Mobile), Gameloft, Gamevil, GREE, GungHo Online Entertainment, Netease, Netmarble, Nexon, Nintendo, Rovio, Warner Brothers, and Zynga and many well-funded private companies, including DoubleDown, Epic Games, Firecraft Studios, Jam City, Machine Zone, Miniclip, Niantic, Peak Games, Playrix, Pocket Gems, Scopely, Storm 8/Team Lava, and Supercell. In addition, hyper-casual games published by companies such as Ketchapp, Lion Studios, Playgendary and Voodoo account for a significant and growing percentage of mobile gaming downloads.

We also face competition from online game developers and distributors who are primarily focused on specific international markets. We could also face increased competition if those companies choose to compete more directly in the United States or the other markets that are significant to us or if large companies with significant online presences such as Apple, Google, Amazon, Facebook, Microsoft or Verizon, choose to enter or expand in the games space or develop competing games. For example, recently Apple launched its Apple Arcade subscription service in which users receive access to a curated selection of paid titles on the App Store, and Google launched its Stadia cloud gaming service in which users are able to stream games to various devices as well opened a new first-party gaming studio that will be creating exclusive games for Stadia. In addition, we also face competition from mobile applications and websites focused on the home design market, which may include games, e-commerce titles, design applications and others seeking to displace our *Design Home* title which is a leading title in the currently unsaturated home design application market. Competitors in this space include, or may include, established game developers, established real estate companies, interior design companies, e-commerce companies and other well-funded private companies looking to enter the home design market.

In addition, given the open nature of the development and distribution for smartphones and tablets and the relatively low barriers to entry, we also compete or will compete with a vast number of small companies and individuals who are able to create and launch games and other content for these devices using relatively limited resources and with relatively limited start-up time or expertise. As an example of the competition that we face, it has been estimated that more than 4.1 million applications, including more than 900,000 active games, were available on Apple's U.S. App Store as of January 31, 2020. The proliferation of titles in these open developer channels makes it difficult for us to differentiate ourselves from other developers and to compete for players without substantially increasing our marketing expenses and development costs.

We also compete for downloads and time spent on mobile devices with companies that develop popular social media and messaging applications, such as Facebook (with its Facebook, Facebook Messenger, Instagram, WhatsApp and other applications), Pinterest, Reddit, Snapchat, Twitter, Vevo and YouTube, companies that develop streaming music, movie and television applications, such as Pandora, Spotify, Tidal, HBO Go, Netflix, Amazon Prime and Hulu, and with companies that create other non-gaming related software applications, such as Kim Kardashian West's own personal media application.

Some of our competitors and our potential competitors have one or more advantages over us, either globally or in particular geographic markets, which include:

- significantly greater financial resources;
- the ability or willingness to spend significantly more than we do to acquire new players, which may be due to competitors having games with higher lifetime values than our games (i.e., the amount of money the average paying player spends in the competitor's game over the player's lifetime is greater than in our games) or where a competitor is willing to pay to acquire users in a manner that does not have a positive return on investment in an effort to increase its revenues and/or user base;
- greater experience with free-to-play games, building and maintaining growth games, and building social and community features into mobile games, as well as more effective game monetization;
- stronger brand and consumer recognition regionally or worldwide;

- the capacity to leverage their marketing expenditures across a broader portfolio of mobile and non-mobile products;
- larger installed user bases from their existing mobile games;
- larger installed user bases from related platforms, such as console gaming or social networking websites, to which they can market and sell mobile games;
- more substantial intellectual property of their own from which they can develop games without having to pay royalties;
- lower labor and development costs and better overall economies of scale;
- greater platform-specific focus, experience and expertise;
- broader global distribution and presence; and
- greater talent, both in overall headcount and in terms of experience in creating successful titles.

Intellectual Property

Our intellectual property is an essential element of our business. We use a combination of trademark, copyright, trade secret and other intellectual property laws, confidentiality agreements and license agreements to protect our intellectual property. Our employees and independent contractors are required to sign agreements acknowledging that all inventions, trade secrets, works of authorship, developments and other processes generated by them on our behalf are our property, and assigning to us any ownership that they may claim in those works. We also vigorously defend our intellectual property. Despite our precautions, it may be possible for third parties to obtain and use without our consent intellectual property that we own or license. Unauthorized use of our intellectual property by third parties, including piracy, and the expenses incurred in protecting our intellectual property rights, may adversely affect our business. In addition, some of our competitors have in the past released games that are nearly identical to successful games released by their competitors in an effort to confuse the market and divert users from the competitor's game to the copycat game. To the extent that these tactics are employed with respect to any of our games, it could reduce our revenue.

Our trademarks that have been registered with the U.S. Patent and Trademark Office include Glu, Crowdstar, our 2-D 'g' character logo, our 3-D 'g' character logo and several of our game titles, including *Blood & Glory*, *Contract Killer*, *Cooking Dash*, *Deer Hunter*, *Diner Dash*, *Eternity Warriors*, *Frontline Commando*, *Gun Bros*, *QuizUp*, and *Tap Sports*. In addition, we have trademark applications pending with the U.S. Patent and Trademark Office for other of our game titles. For certain titles we do not yet have, and do not intend to seek, trademark registration. We also own, or have applied to own, one or more registered trademarks in certain foreign countries, depending on the relevance of each brand to other markets. Registrations of both U.S. and foreign trademarks are renewable every ten years.

We have thirteen patents issued by the U.S. Patent and Trademark Office and have five patent applications pending. In addition, we have one international patent pending with the Patent Cooperation Treaty (PCT), which corresponds to one of our issued U.S. patents. We also have a patent in Canada and Europe, as well as a patent application in China that correspond to one of our thirteen issued U.S. patents, and we also have a patent application pending in Canada that corresponds to another of our thirteen issued U.S. patents.

We also use third-party development tools to create many of our games, including a game development engine licensed from Unity Technologies to create most of our newest games.

From time to time, we encounter disputes over rights and obligations concerning intellectual property. If we do not prevail in these disputes, we may lose some or all of our intellectual property protection, be enjoined from further sales of our games or other applications determined to infringe the rights of others, and/or be forced to pay substantial royalties to a third party, any of which would have a material adverse effect on our business, financial condition and results of operations.

Government Regulation

We are subject to various federal, state and international laws and regulations that affect our business, including those relating to the privacy and security of customer and employee personal information and those relating to the Internet, behavioral tracking, mobile applications, advertising and marketing activities, sweepstakes and contests, and gambling. Additional laws in all of these areas are likely to be passed in the future, which could result in significant limitations on or changes to the ways in which we can collect, use, host, store or transmit the personal information and data of our customers or employees, communicate with our customers, and deliver products and services, or may significantly increase our compliance costs. As our business expands to include new uses or collection of data that are subject to privacy or security regulations, our compliance requirements and costs will increase and we may be subject to increased regulatory scrutiny.

Employees

As of December 31, 2019, we had 715 employees, of which 478 were based in the United States and Canada, and 237 were based in India. We have not experienced any employment-related work stoppages and consider relations with our employees to be good. We believe that our future success depends in part on our continued ability to hire, assimilate and retain qualified employees.

Executive Officers

The following table shows Glu's executive officers as of February 28, 2020 and their areas of responsibility. Their biographies follow the table.

Name	Age	Position
Nick Earl	54	President and Chief Executive Officer
Eric R. Ludwig	50	Executive Vice President, Chief Operating Officer and Chief Financial Officer
Chris Akhavan	37	Senior Vice President, Business & Corporate Development
Becky Ann Hughes	39	Senior Vice President, Revenue
Scott J. Leichtner	49	Vice President, General Counsel and Corporate Secretary

Nick Earl has served as our President and Chief Executive officer since November 2016 and prior to that was our President of Global Studios from November 2015 to November 2016. Before joining us, from November 2014 to September 2015, Mr. Earl served as President of Worldwide Studios at Kabam. From September 2001 to October 2014, Mr. Earl served in several management positions at Electronic Arts, including most recently as Senior Vice President & General Manager of EA Mobile. From 1999 to 2001, Mr. Earl served as VP Product Development at Eidos. From April 1993 to March 1999, Mr. Earl served as an executive producer / GM at The 3DO Company. Mr. Earl holds a B.A. in Economics from the University of California at Berkeley.

Eric R. Ludwig has served as our Chief Operating Officer since October 2014, as our Executive Vice President since October 2011, and as our Chief Financial Officer since August 2008. Mr. Ludwig previously held the position of Senior Vice President, Chief Financial Officer and Chief Administrative Officer from September 2010 to October 2011. Prior to becoming our Chief Financial Officer, Mr. Ludwig served as our Vice President, Finance, Interim Chief Financial Officer from May 2008 to August 2008, served as our Vice President, Finance from April 2005 to May 2008 and served as our Director of Finance from January 2005 to April 2005. In addition, Mr. Ludwig has served as our Assistant Secretary since July 2006. Prior to joining us, from January 1996 to January 2005, Mr. Ludwig held various positions at Instill Corporation, a software as a service company, most recently as Chief Financial Officer, Vice President, Finance and Corporate Secretary. Prior to Instill, Mr. Ludwig was Corporate Controller at Camstar Systems, Inc., an enterprise manufacturing execution and quality systems software company, from May 1994 to January 1996. He also worked at Price Waterhouse L.L.P. from May 1989 to May 1994. Mr. Ludwig holds a B.S. in Commerce from Santa Clara University and is a Certified Public Accountant (inactive).

Chris Akhavan has served as our Senior Vice President, Business & Corporate Development since December 2019. Prior to this, Mr. Akhavan served as our Chief Revenue Officer from May 2016 to December 2019 and as our President of Publishing from April 2013 to May 2016. Before joining us, from January 2010 to April 2013, Mr. Akhavan served in several management positions at Tapjoy, Inc., a provider of mobile advertising, most recently as Senior Vice President, Partnerships. From April 2009 to January 2010, Mr. Akhavan was a Manager, Publisher Network at RockYou!, a social gaming company, and from October 2007 to November 2008, he served as a Strategic Partner Manager at VideoEgg (now SAY Media), an advertising inventory and platform provider. Mr. Akhavan holds a B.A. in Economics from the University of California at Santa Cruz.

Becky Ann Hughes has served as our Senior Vice President, Revenue since December 2019. Prior to this, Ms. Hughes served as the head of our Glu Play game development studio since 2014, most recently in the position of Vice President and General Manager from September 2016 to December 2019. Prior to joining Glu, Ms. Hughes held various leadership roles in product marketing and product management at PlayFirst Inc., which was acquired by Glu in 2014. She holds a Bachelor of Science degree in Business Marketing from San Jose State University.

Scott J. Leichtner has served as our Vice President, General Counsel and Corporate Secretary since September 2010. Mr. Leichtner joined Glu in June 2009 as our Senior Corporate Counsel. Prior to joining us, Mr. Leichtner was a corporate attorney at Fenwick & West LLP, a law firm focused on serving technology clients, from October 1997 to May 2009. Mr. Leichtner holds an A.B. in Political Science from Duke University and a J.D. from the University of Michigan.

Item 1A. Risk Factors

Our business is subject to many risks and uncertainties, which may affect our future financial performance. If any of the events or circumstances described below occurs, our business and financial performance could be harmed, our actual results could differ materially from our expectations and the market value of our stock could decline. The risks and uncertainties discussed below are not the only ones we face. There may be additional risks and uncertainties not currently known to us or that we currently do not believe are material that may harm our business and financial performance. Because of the risks and uncertainties discussed below, as well as other variables affecting our operating results, past financial performance should not be considered as a reliable indicator of future performance and investors should not use historical trends to anticipate results or trends in future periods.

If we fail to develop and timely publish new high-quality, engaging games and continue to enhance our existing games, particularly our most successful games, our revenue would suffer.

Our business depends on developing and publishing mobile games that consumers will download and spend time and money playing. We must continue to invest significant resources in research and development, technology, analytics and marketing to introduce new games and continue to update our successful games, and we often must make decisions about these matters well in advance of a product's release to timely implement them. Our success depends, in part, on unpredictable and volatile factors beyond our control, including consumer preferences and the number of applications they are willing to download to and maintain on their devices, competing gaming and non-gaming related applications, new mobile platforms and the availability of other entertainment activities. If our games do not meet consumer expectations, or they are not brought to market in a timely and effective manner, our business, operating results and financial condition would be harmed. It can be difficult for us to predict with certainty when we will launch a new game as games may require longer development schedules or beta testing periods to meet our quality standards and our players' expectations. For example, we experienced delays in the development and commercial release of *The Swift Life*, and, following global launch, the title did not generate significant revenue and was sunset on February 1, 2019. In 2018, we also decided to delay the worldwide launch dates of *WWE Universe* and *Diner DASH Adventures* to May and June of 2019, respectively, in order to give the development teams additional time to work on these titles. In August 2019, we announced that we were delaying the expected worldwide launch date of *Disney Sorcerer's Arena* to the first quarter of 2020 for similar reasons. While *Diner DASH Adventures* has been commercially successful, *WWE Universe* has performed significantly below our expectations, and it is possible that *Disney Sorcerer's Arena* will not generate significant revenue despite the extra development time. Furthermore, our future game launches could also be delayed, or they may not be successful when and if launched, which would likely harm our business, operating results and financial condition.

Even if our games are successfully introduced in a timely fashion and initially adopted, a failure to continually update them with compelling content or a subsequent shift in the entertainment preferences of consumers could cause a decline in our games' popularity that could materially reduce our revenue and harm our business, operating results and financial condition, which effect would be magnified for our most successful games and, in particular, *Design Home*. In connection with our product strategy, we have committed significant resources to updating, adding new features to and enhancing our existing titles as opposed to launching as many new titles as we have in prior years. However, we may not be successful in doing so, such as was the case with our update of *Covet Fashion* in the first quarter of 2017 or as may be the case with our plan to introduce e-commerce functionality into *Design Home* in 2020. It is difficult to predict when and how quickly the popularity and revenue of one of our games will decline, and if any of our key growth games experience any such unexpected declines, we may not meet our expectations or the expectations of securities analysts or investors for a given quarter. Furthermore, we compete for the discretionary spending of consumers, who face a vast array of entertainment choices, including social media and other non-gaming related apps, games played on personal computers and consoles, television, movies, sports and the Internet. If we are unable to sustain sufficient interest in our games compared to other forms of entertainment, our business and financial results would be seriously harmed.

In addition to the market factors noted above, our ability to successfully develop and launch games for mobile devices and their ability to achieve and maintain commercial success will depend on our ability to:

- minimize launch delays and cost overruns on the development of new games and features;
- successfully enhance and increase the revenue we generate from our existing growth games;
- effectively market and monetize our games;
- achieve a positive return on investment from our marketing and user acquisition efforts;
- sustain sufficient interest in our games compared to other forms of entertainment for our players
- adapt to new technologies and feature sets for mobile and other devices;
- attract and retain experienced and talented employees
- compete successfully against a large growing number of existing market participants;
- minimize and quickly resolve bugs and outages; and
- acquire and successfully integrate high quality mobile game assets, personnel or companies.

These and other uncertainties make it difficult to know whether we will succeed in continuing to develop, launch and enhance successful mobile games in accordance with our operating plan. If we do not succeed in doing so, our business, financial condition, results of operations and reputation will suffer.

Successfully developing and monetizing free-to-play games is a challenging business model.

We face significant challenges in achieving our goal of becoming the leading developer and publisher of free-to-play mobile games. Successful free-to-play games tend to include competitive gameplay, deep meta game features, player versus player activities, regularly updated content and other complex technological and creative attributes. While we are working to include such features in our games, we may not successfully update our games to include these features or they may not be well received by our players. For example, the significant update to *Racing Rivals* that we released in the fourth quarter of 2016 was poorly received by players, led to a significant decline in revenue and ultimately contributed to our decision to sunset this title on April 1, 2019. If we are unable to successfully implement our product strategy, or if we incur excessive expenses in this effort, our financial performance and ability to grow revenue would be negatively affected. Additionally, our existing games compete with our new offerings and the offerings of our competitors, and revenue from our existing catalog games has declined over time, a trend that we expect to continue.

Our efforts to develop new growth games and enhance our existing growth games may prove unsuccessful or, even if successful, it may take more time than we anticipate to achieve significant revenue because, among other reasons:

- our strategy assumes that a large number of players will download our games because they are free and that we will then be able to effectively monetize the games; however, players may not widely download our games for a variety of reasons, including:
 - the increasing competition throughout the mobile gaming industry for downloads, not only with other mobile games but also with social media and other non-gaming related applications;
 - limits on the number of mobile applications players are willing to download to and maintain on their devices;
 - poor consumer reviews or other negative publicity;
 - ineffective or insufficient marketing efforts, particularly since we intend to test new user acquisition channels in 2020 which may be ineffective or whose return on investment may not be as directly measurable as our traditional user acquisition campaigns;
 - lack of sufficient social and community features;
 - lack of prominent storefront featuring;
 - failure to reach and maintain Top Free App Store rankings;
 - the relatively large file size of some of our games; in particular, our games often utilize a significant amount of the available memory on a user's device and tend to consume additional space as players advance through our games, which may cause players to delete our games once the file size grows beyond the capacity of their devices' storage limitations; and
 - the limitations set by Apple, which at most only allow applications that are less than 200 megabytes, to be downloaded over a carrier's wireless network; as a result, players must download our iOS games that exceed 200 megabytes via a wireless Internet (Wi-Fi) connection;
- even if our games are widely downloaded, we may fail to retain users or optimize the monetization of these games; this may occur for a variety of reasons, including poor game design or quality, lack of social and community features, gameplay issues such as game unavailability, long load times or an unexpected termination of the game due to data server or other technical issues, lack of differentiation from predecessor games or other competitive games, lack of innovative features that surprise and delight our players, differences in user demographics and purchasing power or our failure to effectively respond and adapt to changing user preferences through game updates;
- future games that we release may fail to resonate with consumers and games that incorporate licensed property may not be financially successful due to the minimum guaranteed royalty payments to our licensors;
- we intend to continue to develop games based upon our own intellectual property, in addition to well-known licensed brands and properties, and we may encounter difficulties in generating sufficient consumer interest in and downloads of our original intellectual property games;
- many well-funded public and private companies have released, or plan to release, games in the same genres as our growth games or games incorporating the same licensed brands that we intend to use in our games (e.g., Disney/Pixar), and this competition will make it more difficult for us to differentiate our games and derive significant revenue from them;
- we may have difficulty hiring the experienced monetization, live operations, server technology, data analyst, user experience, game designer, and product management personnel that we require to develop our new games and support our existing growth and catalog games, or may face difficulties in developing our technology platform and incorporating it into our products or developing unique gameplay;

- we depend on the proper and continued functioning of our own servers and third-party infrastructure to operate our connected games that are delivered as a service; and
- the impact of potential regulatory issues, including:
 - various jurisdictions are assessing the legality of “loot boxes” which are commonly used in some of our top games and the Federal Trade Commission, or the FTC, held a public workshop in August 2019 to examine consumer protection issues related to loot boxes; to the extent that the FTC or one or more jurisdictions determine that loot boxes constitute gambling or they otherwise elect to regulate the use of loot boxes, it could require us to stop utilizing loot boxes within our games that are distributed in such territories, which would negatively impact our revenues;
 - the Federal Trade Commission, or the FTC, has previously indicated that it intends to review issues related to in-app purchases, particularly with respect to games that are marketed primarily to minors, and the FTC might issue rules significantly restricting or even prohibiting in-app purchases or name us as a defendant in a future class-action lawsuit; and
 - various legislators, administrative bodies and courts, primarily in Europe, have taken actions (including imposing fines) or may be considering taking actions (including antitrust enforcement) against Apple and Google, which are our primary distribution platforms, and Facebook, which is our primary user acquisition channel.

If we do not achieve a sufficient return on our investment with respect to our free-to-play business model, it will negatively affect our operating results and may require us to formulate a new business strategy.

The markets in which we operate are highly competitive, many of our competitors have significantly greater resources than we do and our players may prefer our competitors’ products or competing forms of entertainment.

Developing, distributing and selling mobile games is a highly competitive business, characterized by frequent product introductions and rapidly emerging new platforms, technologies and storefronts. For players, we compete primarily on the basis of game quality, brand and customer reviews. We compete for space on user’s smartphones and tablet devices in terms of the number of applications on their device and the amount of storage consumed by such applications. We also compete more generally for the time, attention and discretionary spending of users of smartphones and tablet devices who are spending ever-increasing amounts of time on social media, messaging and music, movie and television streaming applications, personal computer and console games, sports and the Internet. We compete for promotional and digital storefront placement based on our relationship with the digital storefront owner, historical performance, game quality, perception of sales potential, customer reviews and relationships with licensors of brands and other content. For content licensors, we compete based on royalty and other economic terms, historical financial performance of prior licensed content titles, perceptions of development quality, speed of execution, distribution breadth and relationships with storefront owners. We also compete for experienced and talented employees.

We compete with a continually increasing number of companies, including Activision (the parent company of King Digital Entertainment), DeNA, Disney, Electronic Arts (EA Mobile), Gameloft, Gamevil, GREE, GungHo Online Entertainment, Netease, Netmarble, Nexon, Nintendo, Rovio, Warner Brothers, and Zynga and many well-funded private companies, including DoubleDown, Epic Games, Firecraft Studios, Jam City, Machine Zone, Miniclip, Niantic, Peak Games, Playrix, Pocket Gems, Scopely, Storm 8/Team Lava, and Supercell. In addition, hyper-casual games published by companies such as Ketchapp, Lion Studios, Playgendary and Voodoo account for a significant and growing percentage of mobile gaming downloads.

We also face competition from online game developers and distributors who are primarily focused on specific international markets. We could also face increased competition if those companies choose to compete more directly in the United States or the other markets that are significant to us or if large companies with significant online presences such as Apple, Google, Amazon, Facebook, Microsoft or Verizon, choose to enter or expand in the games space or develop competing games. For example, Apple recently launched its Apple Arcade subscription service in which users

receive access to a curated selection of paid titles on the App Store, and Google recently launched its Stadia cloud gaming service in which users will be able to stream games to various devices as well and opened a new first-party gaming studio that will be creating exclusive games for Stadia. In addition, we also face competition from mobile applications and websites focused on the home design market, which may include games, e-commerce titles, design applications and others seeking to displace our *Design Home* title which is a leading title in the currently unsaturated home design application market. Competitors in this space include, or may include, established game developers, established real estate companies, interior design companies, e-commerce companies and other well-funded private companies looking to enter the home design market. Given the open nature of the development and distribution for smartphones and tablets and the relatively low barriers to entry, we also compete or will compete with a vast number of small companies and individuals who are able to create and launch games and other content for these devices using relatively limited resources and with relatively limited start-up time or expertise. As an example of the competition that we face, it has been estimated that more than 4.1 million applications, including more than 900,000 active games, were available on Apple's U.S. App Store as of January 31, 2020. The proliferation of titles in these open developer channels makes it difficult for us to differentiate ourselves from other developers and to compete for players without substantially increasing our marketing expenses and development costs.

We also compete for downloads and time spent on mobile devices with companies that develop popular social media and messaging applications, such as Facebook (with its Facebook, Facebook Messenger, Instagram, WhatsApp and other applications), Pinterest, Reddit, Snapchat, Twitter, Vevo and YouTube, companies that develop streaming music, movie and television applications, such as Pandora, Spotify, Tidal, HBO Go, Netflix, Amazon Prime and Hulu, and with companies that create other non-gaming related software applications, such as Kim Kardashian West's own personal media application.

Some of our competitors and our potential competitors have one or more advantages over us, either globally or in particular geographic markets, which include:

- significantly greater financial resources;
- the ability or willingness to spend significantly more than we do to acquire new players, which may be due to competitors having games with higher lifetime values than our games (i.e., the amount of money the average paying player spends in the competitor's game over the player's lifetime is greater than in our games) or where a competitor is willing to pay to acquire users in a manner that does not have a positive return on investment in an effort to increase its revenues and/or user base;
- greater experience with free-to-play games, building and maintaining games, and building social and community features into mobile games, as well as more effective game monetization;
- stronger brand and consumer recognition regionally or worldwide;
- the capacity to leverage their marketing expenditures across a broader portfolio of mobile and non-mobile products;
- larger installed user bases from their existing mobile games;
- larger installed user bases from related platforms, such as console gaming or social networking websites, to which they can market and sell mobile games;
- more substantial intellectual property of their own from which they can develop games without having to pay royalties;
- lower labor and development costs and better overall economies of scale;
- greater platform-specific focus, experience and expertise;
- broader global distribution and presence; and
- greater talent, both in overall headcount and in terms of experience in creating successful titles.

If we are unable to compete effectively or we are not as successful as our competitors in our target markets, our sales could decline, our margins could decline and we could lose market share, any of which would materially harm our business, operating results and financial condition.

We rely on a very small portion of our total players for nearly all of our revenue that we derive from in-app purchases.

We rely on a very small portion of our total players for nearly all of our revenue derived from in-app purchases (as opposed to advertisements and incentivized offers) and installation rates and user-growth have declined for us with our most recent product launches. The percentage of unique paying players for our largest revenue-generating free-to-play games has typically been less than 5%, when measured as the number of unique paying users on a given day divided by the number of unique users on that day, though this percentage fluctuates, and it may be higher than 5% for some of our games during specific, relatively short time periods, such as immediately following worldwide launch, during special events or following content updates or marketing campaigns. To significantly increase our revenue, we must increase the number of downloads of our games, increase the number of players who convert into paying players by making in-app purchases or enrolling in subscriptions, increase the amount that our paying players spend in our games and/or increase the length of time our players generally play our games. We might not succeed in our efforts to increase the monetization rates of our users, particularly if we do not increase the amount of social features in our games or otherwise improve our games through updates and live operations. If we are unable to convert non-paying players into paying players, or if we are unable to retain our paying players or if the average amount of revenue that we generate from our players does not increase or declines, our business may not grow, our financial results will suffer, and our stock price may decline.

We have depended on a small number of growth games for a significant portion of our revenue in recent fiscal periods. If these games do not continue to grow or we do not release highly successful new games, our revenue would decline.

In the mobile gaming industry, new games are frequently introduced, but a relatively small number of games account for a significant portion of industry sales. Similarly, a significant portion of our revenue comes from a limited number of games, although the games in that group have shifted over time. Our top three titles for 2019, *Design Home*, the *Tap Sports Baseball* franchise, and *Covet Fashion*, each accounted for greater than 10% of our revenue in the period and collectively generated approximately 78.4% of our revenue during the period, while our top three titles for 2018, *Design Home*, the *Tap Sports Baseball* franchise, and *Covet Fashion*, each accounted for greater than 10% of our revenue in the period and collectively generated approximately 72.0% of our revenue during the period. We expect our dependency on a small number of games, and in particular *Design Home*, for a majority of our revenue will continue for the foreseeable future. We intend to globally launch at least three new titles in 2020, including *Disney Sorcerer's Arena*, in the first quarter of 2020, and if one or more of these titles is unsuccessful, as was the case with our launch of *WWE Universe* in 2019, or if we are unable to grow bookings from *Diner DASH Adventures* so that it becomes a growth game, it could result in an overall decline in our revenues and cause us to continue to rely primarily on our existing growth games for a significant majority of revenues during 2020 and beyond.

We derive the majority of our revenue from Apple's App Store and the Google Play Store, and if we are unable to maintain a good relationship with each of Apple and Google or if either of these storefronts were unavailable for any prolonged period of time, our business will suffer.

The majority of our smartphone revenue has historically been derived from Apple's iOS platform, which accounted for 60.8% of our total revenue for 2019 compared with 63.1% and 63.0% of our total revenue for 2018 and 2017, respectively. We generated the majority of this iOS-related revenue from the Apple App Store, which represented 54.4%, 54.7%, and 54.2% of our total revenue for 2019, 2018 and 2017, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store. In addition, we derived approximately 39.1%, 36.6%, and 36.0% of our total revenue for 2019, 2018 and 2017, respectively, from the Android platform. We generated the majority of our Android-related revenue from the Google Play Store, which represented 33.5%, 31.3%, and 30.3% of our

total revenue for 2019, 2018 and 2017, respectively, with the significant majority of such revenue derived from in-app purchases. We believe that we have good relationships with each of Apple and Google, which have contributed to the majority of our games released in the last several years being featured on their respective storefronts upon worldwide commercial release. If we do not continue to receive prominent featuring, users may find it more difficult to discover our games and we may not generate significant revenue from them. We may also be required to spend significantly more on marketing campaigns to generate substantial revenue on these platforms. Additionally, our efforts to advertise through search advertisements in the Apple App Store may not be successful and may not result in additional users or monetization. In addition, currently neither Apple nor Google charge a publisher when it features one of their apps. If either Apple or Google were to charge publishers to feature an app, it could cause our marketing expenses to increase. Accordingly, any change or deterioration in our relationship with Apple or Google could materially harm our business and likely cause our stock price to decline.

We also rely on the continued functioning of the Apple App Store and the Google Play Store. In the past, these digital storefronts have been unavailable for short periods of time or experienced issues with their in-app purchasing functionality. If such events recur on a prolonged basis or other similar issues arise that impact our ability to generate revenue from these storefronts, it would have a material adverse effect on our revenue and operating results. In addition, if the storefront operators fail to provide high levels of service, our players' ability to access our games may be interrupted or players may not receive the virtual currency or goods for which they have paid, which may adversely affect our brand, revenue and operating results.

The operators of digital storefronts on which we publish our free-to-play games and the advertising channels through which we acquire some of our players in many cases have the unilateral ability to change and interpret the terms of our and others' contracts with them.

We distribute our free-to-play games through direct-to-consumer digital storefronts, for which the distribution terms and conditions are often "click through" agreements that we are not able to negotiate with the storefront operator. For example, we are subject to each of Apple's and Google's standard click-through terms and conditions for application developers, which govern the promotion, distribution and operation of apps, including our games, on their storefronts. Each of Apple and Google can unilaterally change its standard terms and conditions, including platform commission fees, with no prior notice to us. In addition, the agreement terms can be vague and subject to changing interpretations by the storefront operator. Further, these storefront operators typically have the right to prohibit a developer from distributing its applications on its storefront if the developer violates its standard terms and conditions. For example, in April 2019, Apple enforced new guidelines relating to offerwalls which has negatively impacted our revenues from offers in our games; Apple enforced similar guidelines with respect to offerwalls in January 2018 relating to *Design Home*. In addition, in the fourth quarter of 2017, Apple updated its terms of service to require publishers to disclose a player's odds of winning the various items contained within loot boxes, and in May 2019 Google updated its terms of service to require substantially similar disclosure. Glu utilizes loot boxes in many of its current games and the games it intends to release in the future, and it is possible that these disclosure requirements will negatively impact the monetization of these titles. If Apple or Google, or any other key storefront operator, determines that we or one of our key vendors are violating its standard terms and conditions, by a new interpretation or otherwise, or prohibits us from distributing our games on its storefront, it would materially harm our business and likely cause our stock price to significantly decline.

Furthermore, any changes to the advertising channels through which we acquire some of our players, including any changes by Facebook of its advertising platform, which we rely on for a majority of our user acquisition activities, could negatively impact our revenue or otherwise materially harm our business, and we may not receive significant or any advance warning of such changes.

It is becoming increasingly difficult and more expensive for us to acquire players for our games and we may not achieve a positive return on investment on our user acquisition efforts.

It is becoming increasingly difficult and more expensive for us to acquire players for our games for a variety of reasons, including the increasingly competitive nature of the mobile gaming industry and the significant amount of time and attention users are dedicating to competing entertainment options, including social media and other non-gaming applications. In addition, we believe that changes that Apple has implemented during the last several years to its

platform, particularly the removal of the Top Grossing rankings and decreasing the prominence of the Top Free rankings, has negatively impacted the number of organic downloads of our games. These factors have contributed to an overall decline in our daily and monthly active users for our existing games as well as fewer players downloading our new games than in the past despite our substantially increased spending on user acquisition efforts. For example, our launch of *Diner DASH Adventures* in June 2019 resulted in significantly fewer downloads than prior versions of our *Dash* franchise such as *Cooking Dash* and *Restaurant Dash with Gordon Ramsay*. If the number of players who download our new title launches scheduled for 2020 does not meet our expectations, in particular for *Disney Sorcerer's Arena* and the next iteration of our *Deer Hunter* franchise, our revenues and operating results will suffer. Our existing successful growth games are not immune to these trends, as we experienced significantly higher CPIs (costs per install) for *Design Home* and *Covet Fashion* during the first half of 2019 due to substantial increases in spending by several competitors, which negatively impacted the revenue and margins for these titles. Furthermore, our spending on user acquisition is designed so that we will achieve a positive return on investment – that is, we expect that the amount we spend to acquire users in our games will be less than the revenue we ultimately generate from such acquired users. In order to determine the expected revenue from acquired users who may play our games for multiple years, we often must make certain assumptions about their projected spending behavior, particularly for new games like *Disney Sorcerer's Arena* for which we do not have similar games in our portfolio to aid us in our modeling efforts. To the extent that we do not achieve a positive return on investment on our user acquisition spending, it will negatively impact our margins and overall operating results.

We have a history of net losses, may incur substantial net losses in the future and may not achieve and sustain profitability or growth in future periods.

We have incurred significant losses since inception, including a net loss of \$13.2 million in 2018 and a net loss of \$97.6 million in 2017. As of December 31, 2019, we had an accumulated deficit of \$431.6 million. Although we generated net income of \$8.9 million during the year ended December 31, 2019, we may not be able to sustain profitability on a long-term basis. While we conducted several restructurings and divested our Moscow game development studio during 2017, which measures were aimed at reducing our fixed costs and operating more efficiently, our costs may continue to rise as we implement additional initiatives designed to increase revenue, potentially including: investing more heavily in our existing growth games as part of our product strategy; increasing our spending on user acquisition efforts, particularly for our growth games and our new title launches; hiring additional staff in our San Francisco Bay Area and Hyderabad, India locations; developing new games with greater complexity, higher production values and deeper social features; running live operations on our games; and taking other steps to strengthen our company. We anticipate that the costs of acquiring new players and otherwise marketing our games will continue to rise, particularly since advertising costs in our industry have generally been rising and we have encountered increasing difficulties in generating downloads of our games as users spend more time on alternative software applications, such as social media, messaging, and streaming applications. We may also continue to incur significant costs to acquire rights to third party intellectual property, including incurring significant minimum guaranteed royalty payments. If our revenue does not increase at a rate sufficient to offset these additional expenses, if the launch dates for our games are delayed, if we do not realize a sufficient return on our user acquisition spending for our growth games, if we experience unexpected significant increases in operating expenses or if we are required to take additional charges related to impairments or restructurings, we will continue to incur losses. For example, during the fiscal years ended December 31, 2019, 2018 and 2017, we recorded impairments of \$0.5 million, \$0.7 million and \$27.3 million, respectively, related to certain contractual minimum guarantee payments made to certain of our celebrity licensors and other prepaid royalties. Additionally, we have taken restructuring charges in the past, including \$6.0 million during 2017 related to headcount reductions and other restructuring activities and a \$2.7 million charge relating to impairment of acquired in process research and development during the third quarter of 2018. Furthermore, given the significant amount of time and attention users are dedicating to social media and other non-gaming applications, increasing revenue may be challenging.

Our financial results could vary significantly from quarter to quarter and are difficult to predict, which in turn could cause volatility in our stock price.

Our revenue and operating results could vary significantly from quarter to quarter due to a variety of factors, many of which are outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful. In addition, we may not be able to accurately predict our future revenue or results of operations. We

base our current and future expense levels on our internal operating plans and sales forecasts, and our operating costs are to a large extent fixed. As a result, we may not be able to reduce our costs sufficiently to compensate for an unexpected shortfall in revenue, and even a small shortfall in revenue could disproportionately and adversely affect financial results for that quarter.

In addition to other factors discussed in this section, factors that may contribute to the variability of our quarterly results and the volatility in our stock price include:

- our ability to increase the number of our paying players and the amount that each paying player spends in our games;
- the popularity and monetization rates of our new games released during the quarter and the ability of games released in prior periods to sustain their popularity and monetization rates;
- the number and timing of new games and significant updates released by us and our competitors, which timing can be impacted by internal development delays, longer than anticipated beta testing periods, shifts in product strategy and how quickly digital storefront operators review and approve our games for commercial release;
- changes in the prominence of storefront featuring for our games and those of our competitors;
- the loss of, or changes to, one of our distribution platforms;
- changes to the Apple iOS platform or the Google Android platform to which we are not able to adapt our game offerings;
- fluctuations in the size and rate of growth of overall consumer demand for smartphones, tablets, games and related content;
- the amount and timing of charges related to any future impairments of goodwill, intangible assets, prepaid royalties and guarantees; for example, in 2019, 2018 and 2017, we impaired \$0.5 million, \$0.7 million and \$27.3 million, respectively, related to contractual minimum guarantee royalty payments made to certain celebrity licensors and other prepaid royalties, and in future periods we may be required to impair our goodwill due to further declines in our business and/or stock price, or take additional large impairments related to contractual minimum guarantee commitments if the associated games we are developing are not successful;
- changes in the mix of revenue derived from games based on original intellectual property versus licensed intellectual property;
- changes in the mix of revenue derived from in-app purchases, advertisements and offers, which mix often depends on the nature of new titles launched during the quarter;
- changes in the amount of money we spend marketing our titles in a particular quarter, including the average amount we pay to acquire each new user, as well as changes in the timing of these marketing expenses within the quarter;
- decisions by us to incur additional expenses, such as increases in research and development, restructuring expenses, or unanticipated increases in vendor-related costs, such as hosting fees;
- the timing of successful mobile device launches;
- the seasonality of our industry;
- changes in accounting rules, such as those governing recognition of revenue, including the period of time over which we recognize revenue for in-app purchases of virtual currency and goods within some of our games, as well as estimates of average playing periods and player life;
- the activities, announcements and performance of our commercial partners: and
- macro-economic fluctuations in the United States and global economies, including those that impact discretionary consumer spending.

We may not, or may be unable to, renew our existing content licenses when they expire and may not choose to obtain additional licenses or be able to obtain new licenses on favorable terms, which could negatively impact our revenue if we fail to replace such revenue with revenue from games based on our own intellectual property.

In 2019, we generated 30.1% of our revenue from games that are based on or substantially incorporate third-party intellectual property, such as the *Tap Sports Baseball* franchise, *Kim Kardashian: Hollywood*, *Restaurant Dash with Gordon Ramsay*, and *WWE Universe*. We expect to continue to derive significant revenue from these titles in 2020, particularly the *Tap Sports Baseball* franchise, and expect to continue to develop new titles featuring third-party intellectual property, such as *Disney Sorcerer's Arena*. Certain of our licenses expire at various times during the next several years, and we may be unable to renew these licenses on terms favorable to us or at all, and we may have difficulties obtaining licenses from new content owners on terms acceptable to us, if at all. In addition, these licensors could decide to license to our competitors or develop and publish their own mobile games, competing with us in the marketplace. We also license certain brands and their assets for our *Covet Fashion* and *Design Home* titles without the provision of a license fee or royalty. These licensors could decide to no longer license their assets under the current terms, and to instead charge a one-time payment, ongoing royalty or both, which may adversely affect the profitability of these titles. Failure to maintain or renew our existing licenses or to obtain additional licenses would prevent us from continuing to offer our current licensed games and introducing new mobile games based on such licensed content, which could harm our business, operating results and financial condition.

Securing license agreements to develop, publish and market games based on or significantly incorporating celebrities, third-party licensed brands, properties, and other content typically requires that we make minimum guaranteed royalty and other payments to such licensors, and to the extent such payments become impaired, our operating results would be harmed.

In connection with partnerships with celebrities and other licensors of third-party brands, properties and content, we have incurred and may continue to incur significant minimum guaranteed royalty and other payments. As a result, we may incur impairments on such payments if our forecasts for these games are lower than we anticipated at the time we entered into the agreements. For example, in 2019, 2018 and 2017, we impaired \$0.5 million, \$0.7 million and \$27.3 million, respectively, related to contractual minimum guaranteed royalty payments made to certain of our celebrity licensors and other prepaid royalties. As of December 31, 2019, we had remaining prepaid royalty balances totaling \$42.2 million. We expect to continue to selectively license third-party licensed brands, properties and other content and to pay minimum guaranteed royalty payments in connection with such deals. As a result, we may be required to take impairments in future periods if the games we are developing that have significant contractual minimum guarantee commitments associated with them are not successful.

If we do not successfully establish and maintain awareness of our brand and games, if we fail to develop high-quality, engaging games that are differentiated from our prior games, if we incur excessive expenses maintaining and promoting our brand or our games or if our games contain defects or objectionable content, our operating results and financial condition could be harmed.

We believe that establishing and maintaining our brand is critical to establishing, developing and maintaining favorable relationships with players, distributors, content licensors, platform providers, advertisers and key talent. Increasing awareness of our brand and recognition of our games is particularly important in connection with our strategic focus of developing games based on our own intellectual property. Our ability to promote the Glu brand and increase recognition of our games depends on our ability to develop high-quality, engaging games, including integrating the level of social and community features appropriate for a game's target audience and partnering with brands with fan bases that can support successful mobile games. If consumers, digital storefront owners and branded content owners do not perceive our existing games as high-quality or if we introduce new games that are not favorably received by them, then we may not succeed in building brand recognition and brand loyalty in the marketplace. In addition, globalizing and extending our brand and recognition of our games is costly and involves extensive management time to execute successfully. Although we make significant sales and marketing expenditures in connection with the launch of our games, these efforts may not succeed in increasing awareness of our brand or the new games. If we fail to maintain and increase brand awareness and consumer recognition of our games, our potential revenue could be limited, our costs could increase and our business, operating results and financial condition could suffer.

In addition, if a game contains objectionable content, we could experience damage to our reputation and brand. Our games may contain violence or other content that some consumers may find objectionable, particularly in light of high-profile mass shootings. For example, many of our shooter games, including our *Deer Hunter* games, have a 17-and-older rating on the Apple App Store due to its violence. Despite these ratings, consumers may be offended by some of our game content and children to whom these games are not targeted may choose to play them without parental permission nonetheless. In addition, our employees or employees of outside developers could include hidden features in our games without our knowledge, which might contain profanity, graphic violence, sexually explicit or otherwise objectionable material. Users of our games, particularly games with social messaging features, may utilize these features for illegal purposes or target certain users through these features. If consumers believe that a game we published contains objectionable content or may expose them to nefarious individuals, it could harm our brand, consumers could refuse to download it or demand a refund for any in-app purchases and could pressure the digital storefront operators to no longer allow us to publish the game on their platforms. Similarly, if any of our games are introduced with defects, vulnerabilities or have playability issues, we may receive negative user reviews, our brand may be damaged and our operating results and revenue negatively affected. For example, our attempt to relaunch our *Racing Rivals* title, which had experienced playability and user interface issues in the past, in the second quarter of 2018 by introducing new features and resetting the economy of the game resulted in the game crashing and not being available to most users for several days. As a result, the daily active users of *Racing Rivals* and the revenue that we generated from this title significantly decreased from peak levels which contributed to our decision to shut down the game effective as of April 1, 2019. In addition, any issues relating to our games could be exacerbated if our customer service department does not timely and adequately address issues that our players have encountered with our games.

We rely on a combination of our own servers and technology and third party infrastructure to operate our games, and a significant portion of our game traffic is hosted by a single vendor. If we experience any system or network failures, unexpected technical problems, cyber attacks or any other interruption to our games, it could reduce our sales, increase costs, or result in a loss of revenue or loss of end users of our games.

We rely on our own servers and third-party infrastructure to operate our games, and we expect that our reliance on such third-party infrastructure and our technology platform will increase as we continue to add additional social features and functionality into our games. We do not control these third parties and replacing them might require significant time and expense. In particular, a significant portion of our game traffic is hosted by Amazon Web Services, which service provides server redundancy and uses multiple locations on various distinct power grids. Amazon may terminate its agreement with us upon 30 days' notice. In addition, Amazon has experienced brief power outages on occasion during the past several years that have affected the availability of certain of our games during such outages. While none of these events adversely impacted our business, a similar outage of a longer duration could. Any technical problem with cyber-attack on, or loss of access to these third parties' or our systems, servers or other technologies, including our technology platform, could result in the inability of end users to download or play our games, cause interruption to gameplay, prevent the completion of billing for a game or result in the loss of users' virtual currency or other in-app purchases, interfere with access to some aspects of our games or result in the theft of end-user personal information. For example, in the second quarter of 2018, our efforts to relaunch *Racing Rivals* resulted in the game crashing and not being available to most users for several days. In addition, in the second quarter of 2017, we experienced technical issues with our *Covet Fashion* title that caused an extended outage and resulted in certain users receiving in-game currency erroneously. If users are unable to access and play our games for any period of time, if virtual assets are lost, or if users do not receive their purchased virtual currency, we may receive negative publicity and game ratings, we may lose players of our games, we may be required to issue refunds, and we may become subject to regulatory investigation or class action litigation, any of which would negatively affect our business. Any of these problems could require us to incur substantial repair costs, distract management from operating our business and result in a loss of revenue. Furthermore, our disaster recovery systems and those of third-parties with which we do business may not function as intended or may fail to adequately protect our critical business information in the event of a significant business interruption, which may cause interruption in service of our games, security breaches or the loss of data or functionality, which could negatively affect our business, financial condition or results of operations.

Cyber attacks, security breaches, and computer viruses could harm our business, reputation, brand and operating results.

Cyber-attacks, security breaches, and computer viruses have occurred on our systems in the past and may occur on our systems in the future. We store sensitive information, including personal information about our employees. In addition, our games involve the storage and transmission of players' personal information in our facilities and on our equipment, networks and corporate systems run by us or managed by third-parties including Apple, Google, Facebook, Microsoft, and Amazon. Our player data, corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, and, as a result, an unauthorized party may obtain access to our data, our employees' data, our players' data or any third party data we may possess. In addition, outside parties have in the past and may in the future attempt to fraudulently induce employees to disclose information in order to gain access to this data. Any such incidents, particularly of longer duration, could damage our brand and reputation and result in a material loss of revenue. Given the global nature of our business and the low cost, relative ease and proliferation of internet enabled devices, we may be at an increased risk for cyber-attacks and, specifically, denial of service attacks. In addition, the chat and other social features in our games could potentially be used by terrorist organizations or other criminals to communicate or for other nefarious purposes, which could severely damage our brand and reputation. If an actual or perceived security breach of our or a third-party system on which we rely occurs, the market perception of the effectiveness of our security measures could be harmed, we could lose players and advertisers, and we could suffer significant legal and financial harm including loss of revenue due to such events or in connection with remediation efforts and costs, investigation costs or penalties, litigation, regulatory and enforcement actions, compliance with notification obligations, changed security and system protection measures. Any of these actions could have a material and adverse effect on our business, reputation and operating results.

We use a game development engine licensed from Unity Technologies to create many of our games. If we experience any prolonged technical issues with this engine or if we lose access to this engine for any reason, it could delay our game development efforts and cause our financial results to fall below expectations for a quarterly or annual period, which would likely cause our stock price to decline.

We use a game development engine licensed from Unity Technologies to create many of our games, and we expect to continue to use this engine for the foreseeable future. Because we do not own this engine, we do not control its operation or maintenance, nor do we control how the engine is updated or upgraded. As a result, any prolonged technical issues with this engine might not be resolved quickly, despite the fact that we have contractual service level commitments from Unity. In addition, to the extent that we require any functionality that is not offered by Unity we are dependent on Unity to update or upgrade its engine to offer such functionality. Furthermore, although Unity cannot terminate our agreement absent an uncured material breach of the agreement by us, we could lose access to this engine under certain circumstances, such as a natural disaster that impacts Unity or a bankruptcy event. If we experience any prolonged issues with the operation of the Unity game development engine, if the Unity game development engine does not offer the functionality we require or if we lose access to this engine for any reason, it could delay our game development efforts and cause us to not meet revenue expectations for a quarterly or annual period, which would likely cause our stock price to decline. Further, if one of our competitors acquired Unity, the acquiring company would be less likely to renew our agreement, which could impact our game development efforts in the future, particularly with respect to sequels to games that were created on the Unity engine.

We derive a significant portion of our revenue from advertisements and offers that are incorporated into our free-to-play games through relationships with third parties. If we lose the ability to provide these advertisements and offers for any reason, if we become victim to advertising fraud or if any events occur that negatively impact the revenue we receive from these sources, it would negatively impact our operating results.

In addition to in-app purchases, we derive revenue from our free-to-play games through advertisements and offers. We incorporate advertisements and offers into our games by implementing third parties' software development kits. We rely on these third parties to provide us with a sufficient inventory of advertisements and offers to meet the demand of our user base. If we exhaust the available inventory of these third parties, it will negatively impact our

revenue. If our relationship with any of these third parties terminates for any reason, or if the commercial terms of our relationships do not continue to be renewed on favorable terms, we would need to locate and implement other third party solutions, which could negatively impact our revenue, at least in the short term. In addition, we may be susceptible to various types of advertising fraud, which could reduce the effectiveness of our advertising campaigns or cause us to pay money to advertising firms for installations that were wrongly attributed to such firms. While we have implemented measures to detect and prevent advertising fraud, such measures may not prove effective, which would harm our user acquisition efforts and could harm our revenues. Furthermore, the revenue that we derive from advertisements and offers is subject to seasonality, as companies' advertising budgets are generally highest during the fourth quarter and decline significantly in the first quarter of the following year, which negatively impacts our revenue in the first quarter.

The actions of the storefront operators can also negatively impact the revenue that we generate from advertisements and offers. For example, in April 2019, Apple enforced new guidelines relating to offerwalls which has negatively impacted our revenues from offers in our games; Apple enforced similar guidelines with respect to offerwalls in January 2018 relating to *Design Home*. Any similar changes in the future that impact our revenue that we generate from advertisements and offers could materially harm our business.

We rely on assumptions and estimates to calculate certain of our key metrics, and real or perceived inaccuracies in such metrics may harm our reputation and negatively affect our business.

Certain of our key metrics, including the number of our daily and monthly active users, our average revenue per daily user and the average useful life of our paying players, is calculated using internal company data from multiple analytics systems that have not been independently verified. The calculation of these metrics is described in detail under the heading titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—*Key Operating Metrics*." While these numbers are based on what we believe to be reasonable calculations for the applicable period of measurement, there are inherent challenges in measuring these metrics across our large user base around the world. We regularly review and may adjust our processes for calculating our internal metrics to improve their accuracy, but these efforts may not prove successful and we may discover material inaccuracies. In addition, our methodology for calculating these metrics may differ from the methodology used by other companies to calculate similar metrics. For example, we currently treat an individual who plays two different Glu games on the same day or who plays the same game on two different devices during the same day (e.g., iPhone and an iPad) as two active users for each such day when we average or aggregate active users over time. As such, the calculations of our active users may not precisely reflect the actual number of people using our titles. We may also discover unexpected errors in our internal data that resulted from technical or other errors. Furthermore, our Crowdstar studio utilizes a separate analytics system from the rest of our company, which could result in internal inconsistencies or errors. If we determine that any of our metrics are not accurate, we may be required to revise or cease reporting such metrics and it may harm our reputation and business.

Our business and growth may suffer if we are unable to hire and retain key personnel.

Our future success will depend, to a significant extent, on our ability to attract, retain and motivate our key personnel, namely our management team, creative leaders and experienced game development personnel. In particular, Nick Earl, our President and Chief Executive Officer, is critical to our vision, strategic direction, products and technology, and the continued retention of the other members of our senior management team is important to our continued success. In addition, to grow our business, execute on our business strategy and replace departing employees, we must identify, hire and retain qualified personnel, particularly experienced monetization, live operations, server technology, data analyst, user experience, game designer, and product management personnel to develop and support our growth games. Attracting and retaining key personnel and other staff is difficult in a competitive hiring market, particularly in the San Francisco Bay Area where we are headquartered, and we may not succeed in doing so. The gaming and technology industries are also traditionally male dominated, so it may be difficult for us to recruit and retain talented female personnel who may be needed to help us optimize our games that are targeted to a more female-focused audience, including our games in the lifestyle and casual genres. Volatility of our stock price, changes in our compensation structure for our executive officers that significantly relies on performance linked stock awards, and previous headcount reductions may make it more difficult for us to attract and retain top talent. In particular, should our

stock price decline it might be difficult for us to attract and retain qualified personnel, since individuals may elect to seek employment with other companies that they believe have better long-term prospects or that present better opportunities for earning equity-based compensation. Competitors have in the past and may in the future attempt to recruit our employees, and our management and key employees are not bound by agreements that could prevent them from terminating their employment at any time. In addition, we do not maintain a key-person life insurance policy on any of our officers. Our business and growth may suffer if we are unable to hire and retain key personnel.

Any restructuring actions and cost reduction initiatives that we undertake may not deliver the results we expect, and these actions may adversely affect our business.

During the last several years we have implemented restructuring actions and cost reduction initiatives to streamline operations and improve cost efficiencies. Some of our previous restructurings included reductions in personnel in Bellevue, Washington; San Francisco, California; Long Beach, California; Portland, Oregon; and Beijing, China, as well as the divestiture of our Moscow, Russia game development studio. Any future restructurings or divestitures could result in disruptions to our operations and adversely affect our business. For example, in connection with the divestiture of our Moscow studio, we transitioned certain titles that were developed or operated by the Moscow studio, including *Deer Hunter 2018*, to our Hyderabad, India studio. We have seen a decline in revenues from *Deer Hunter 2018*, which may in part be related to this transition. In addition, we cannot be sure that any cost reduction and streamlining initiatives will be as successful in reducing our overall expenses as we expect or that additional costs will not offset any such reductions or streamlining. If our operating costs are higher than we expect or if we do not maintain adequate control of our costs and expenses, our operating results will suffer.

We may not realize the benefits expected through our strategic relationship with Tencent and other aspects of the relationship could have adverse effects on our business.

In April 2015, we entered into a strategic relationship with Tencent, a leading Internet company in China and arguably the world's largest gaming company. Tencent, through a controlled affiliate, agreed to invest \$126.0 million in exchange for approximately 16.3% of our total outstanding common stock on a post-transaction basis. In November 2015, we entered into an agreement with an affiliate of Tencent to license and publish its game, *WeFire*, in the United States and international markets outside of Asia under the name *Rival Fire*, which we launched in July 2016. In light of the poor performance of the title in terms of monetization and downloads, and the related contractual prepaid royalty commitments and license fees under our agreement with the affiliate of Tencent, we impaired \$14.5 million in the third quarter of 2016. We may not succeed in entering into any other agreements or operating partnerships with Tencent in the future. Even if we do enter into any operational partnerships, it could take months to years to fully realize the benefits of such partnerships or they may not be successful as was the case with *WeFire*, and, to the extent such agreements involve publishing our games in China, some of our platform partners in China and other parts of Asia may view such a partnership negatively.

Tencent, through its controlled affiliates, held approximately 14.2% of the aggregate voting power of our common stock as of December 31, 2019, and could acquire up to 25.0% of the voting power through open-market purchases of our common stock. While Tencent has agreed to cause these shares to be voted with the majority recommendation of the independent members of our board of directors on most matters, Tencent could have considerable influence over matters such as approving a potential acquisition of us. Tencent was also granted the right to designate a member of our board of directors, and currently Ben Feder, Tencent's President of International Partnerships (North America), is Tencent's representative on our board of directors. Mr. Feder or any future Tencent designee could have an actual or apparent conflict of interest in such matters. Tencent's investment in and position with us could also discourage others from pursuing any potential acquisition of us, which could have the effect of depriving the holders of our common stock of the opportunity to sell their shares at a premium over the prevailing market price.

Our reported financial results could be adversely affected by changes in financial accounting standards or by the application of existing or future accounting standards to our business as it evolves.

Our reported financial results are impacted by the accounting policies promulgated by the SEC and accounting standards bodies and the methods, estimates and judgments that we use in applying our accounting policies. The frequency of accounting policy changes may accelerate, including conversion to unified international accounting standards. Policies affecting revenue recognition have affected, and could further significantly affect, the way we account for revenue. For example, the accounting for revenue derived from free-to-play games, particularly with regard to revenue generated from online digital storefronts, is still evolving and, in some cases, uncertain. While we believe that we are correctly accounting for our revenues, this is an area that continues to involve significant discussion among accounting professionals and the future changes to the standard may cause our operating results to fluctuate. In addition, we currently defer revenue related to virtual goods and currency over the average playing period of paying users, which approximates the estimated weighted average useful life of the transaction. While we believe our estimates are reasonable based on available game player information, we may revise such estimates in the future in the event the average playing period of our paying users changes. Any adjustments arising from changes in the estimates of the lives of these virtual items would be applied to the current quarter and prospectively on the basis that such changes are caused by new information indicating a change in the game player behavior patterns of our paying users. Any changes in our estimates of useful lives of these virtual items may result in our revenue being recognized on a basis different from prior periods' and may cause our operating results to fluctuate. As we enhance, expand and diversify our business and product offerings, the application of existing or future financial accounting standards could have a significant adverse effect on our reported results although not necessarily on our cash flows.

If we are unable to maintain effective internal control over financial reporting, the accuracy and timeliness of our financial reporting may be adversely affected.

Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial statements. If we are unable to maintain such internal controls, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls as required pursuant to the Sarbanes-Oxley Act, it could result in a material misstatement of our financial statements that would require a restatement, and investor confidence in the accuracy and timeliness of our financial reports and the market price of our common stock could be negatively impacted.

Conversion of key internal systems and processes, particularly our ERP system, and problems with the design or implementation of these systems and processes could interfere with, and therefore harm, our business and operations.

We underwent a multi-phase project that began in 2016 to convert certain key internal business systems and processes, including our enterprise resource planning, or ERP, system to a cloud based system. In connection with the transition to our new ERP system, we shutdown certain of our legacy ERP systems in the third quarter of 2016, which affected certain of our processes in the second half of 2016 and may continue to impact our processes. While we have transitioned to our new ERP system, we may need to resolve issues that arise in connection with this transition. We have invested, and will continue to invest, significant capital and human resources in the design and implementation of these business systems and processes. Any problems in the functioning of the new systems or processes, particularly any that impact our operations, could adversely affect our ability to process payments, record and transfer information in a timely and accurate manner, recognize revenue, file SEC reports in a timely manner, or otherwise run our business. Even if we encounter these adverse effects, as noted above, the design and implementation of these new systems and processes may be more time consuming than we anticipated and could negatively impact our business, financial condition, and results of operations.

Our business will suffer if our acquisition and strategic investment activities are unsuccessful or disrupt our ongoing business, which may involve increased expenses and may present risks not contemplated at the time of the transactions.

We have acquired and invested in, and intend to continue to acquire and invest in, companies, products and technologies that complement our strategic direction. Acquisitions and investments involve significant risks and uncertainties, including:

- diversion of management's time and a shift of focus from operating the business to issues related to negotiation of acquisition or investment terms, integration and administration;
- our ability to successfully integrate acquired technologies and operations into our business and maintain uniform standards, controls, policies and procedures;
- potential employee morale and retention issues resulting from any reductions in compensation, or changes in management, reporting relationships, or future prospects;
- potential product development delays resulting from any changes and disruptions that may follow the acquisition;
- significant competition from other acquirers and investors as the gaming industry consolidates and challenges in offering attractive consideration given the volatility of our stock price and potential difficulties in obtaining alternative financing;
- challenges retaining the key employees, customers and other business partners of the acquired or investee business;
- our ability to realize synergies expected to result from an acquisition or strategic investment;
- an impairment of acquired goodwill and other intangible assets or investments in future periods would result in a charge to earnings in the period in which the write-down occurs, such as the case with the impairment charge for acquired in-process research and development recorded in the third quarter of 2018;
- the internal control environment of an acquired or investee entity may not be consistent with our standards and may require significant time and resources to improve;
- in the case of foreign acquisitions or strategic investments, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;
- liability for activities of the acquired or investee companies before the acquisition or investment, including violations of laws, rules and regulations, commercial disputes, tax liabilities, intellectual property and other litigation claims or disputes, accounting standards and other known and unknown liabilities;
- harm to our brand and reputation; and
- harm to our existing business relationships with business partners and advertisers as a result of the acquisition.

In particular, we acquired Crowdstar in the fourth quarter of 2016 in a multi-step transaction that did not involve the cooperation of Crowdstar's management, where the former Chief Executive Officer of Crowdstar did not continue with the company post-acquisition and where we did not receive customary representations, warranties or indemnities from the acquired company. While we successfully integrated Crowdstar into our company and Crowdstar's top titles, *Covet Fashion* and *Design Home*, are generating significant revenue, we still face risks and uncertainties in connection with this acquisition. For example, we may not be able to retain key Crowdstar employees for a variety of reasons, including the fact that we relocated the Crowdstar team from Burlingame, California to our new San Francisco headquarters during the fourth quarter of 2018, and the loss of key Crowdstar employees could affect revenue derived from *Covet Fashion* and *Design Home*.

In addition, if we issue equity securities as consideration in an acquisition or strategic investment, as we did for our acquisitions of Griptonite, Inc., Blammo Games Inc., GameSpy Industries, Inc., PlayFirst, Inc. and Cie Games, Inc., our current stockholders' percentage ownership and earnings per share would be diluted. We may also need to raise additional capital in the event we use a significant amount of cash as consideration in an acquisition. Because acquisitions and strategic investments are inherently risky, our transactions may not be successful and may, in some cases, harm our operating results or financial condition.

Changes in foreign exchange rates and limitations on the convertibility of foreign currencies could adversely affect our business and operating results.

We currently transact business in more than 100 countries and in dozens of different currencies, with the Canadian Dollar and Indian Rupee being the primary international currencies in which we transact business. Conducting business in currencies other than U.S. Dollars subjects us to fluctuations in currency exchange rates that could have a negative impact on our reported operating results. We experienced significant fluctuations in currency exchange rates in the past and expect to experience continued significant fluctuations in the future. We incur expenses for employee compensation and other operating expenses at our non-U.S. locations in the local currency, and an increasing percentage of our international revenue is from customers who pay us in currencies other than the U.S. Dollar. Fluctuations in the exchange rates between the U.S. Dollar and those other currencies could result in the U.S. Dollar equivalent of these expenses being higher and/or the U.S. Dollar equivalent of the foreign-denominated revenue being lower than would be the case if exchange rates were stable. This could negatively impact our operating results. To date, we have not engaged in exchange rate hedging activities, and we do not expect to do so in the foreseeable future.

We face added business, political, regulatory, operational, financial and economic risks as a result of our international operations and distribution, any of which could increase our costs and adversely affect our operating results.

International sales represented approximately 22.1%, 23.5%, and 24.5% of our revenue during 2019, 2018 and 2017, respectively. To target international markets, we develop games that are customized for consumers in those markets. We have international offices located in Canada and India. We expect to increase our international presence, as we intend to increase the number of our employees in our Hyderabad, India office. Risks affecting our international operations include:

- our ability to develop games that appeal to the tastes and preferences of consumers in international markets;
- difficulties developing, staffing, and simultaneously managing a large number of varying foreign operations as a result of distance, language, and cultural differences;
- multiple and conflicting laws and regulations, including complications due to unexpected changes in these laws and regulations;
- our ability to develop, customize and localize games that appeal to the tastes and preferences of consumers in international markets;
- competition from local game developers that have significant market share in certain foreign markets and a better understanding of local consumer preferences;
- potential violations of the Foreign Corrupt Practices Act and local laws prohibiting improper payments to government officials or representatives of commercial partners;
- regulations that could potentially affect the content of our products and their distribution, such as in China where multiple governmental bodies must review and approve of any gaming application before it may be published;
- foreign exchange controls that might prevent us from repatriating income earned in countries outside the United States;
- potential adverse foreign tax consequences, since due to our international operations, we must pay income tax in numerous foreign jurisdictions with complex and evolving tax laws;

- political, economic and social instability in some regions of the world;
- health epidemics or contagious diseases, such as the novel coronavirus, that negatively impact our customers or supply chain;
- restrictions on the export or import of technology;
- trade and tariff restrictions and variations in tariffs, quotas, taxes and other market barriers; and
- difficulties in enforcing intellectual property rights in certain countries.

These risks could harm our international operations, which, in turn, could materially and adversely affect our business, operating results and financial condition. We may also liquidate or cease operating some of our foreign subsidiaries in the future which may raise additional risks, including related to taxes and obtaining governmental approvals.

If the mobile games market is disrupted by new technologies and we are not able to appropriately adapt our business, our business will suffer.

The mobile games market could be disrupted by new technologies that could impact our business. For example, the introduction of 5G wireless networking will offer technological advancements like faster download speeds and lower latency. While these technological advancements will provide opportunities for our business, it may also create risks if we do not adapt to these new technologies in a quick and timely manner. For example, 5G technology may result in the proliferation of game streaming services. Multiple instances of new cloud gaming services are already commercially available and new entrants like Google and Microsoft have or will announce their ability to stream games to mobile devices. Some of these new streaming entrants will also choose to publish first-party content on their platforms. Streaming technology could potentially disrupt the mobile gaming industry by enabling companies to publish cross-platform games that users can play across multiple platforms and devices. This could result in consumers choosing to play these cross-platform games rather than our games which are currently only available on mobile devices. If we do not appropriately adapt our business to new technologies, our business will suffer.

If we fail to deliver our games at the same time as new mobile devices are commercially introduced, our revenue may suffer.

Our business depends, in part, on the commercial introduction of new mobile devices with enhanced features, including larger, higher resolution color screens, improved audio quality, and greater processing power, memory, battery life and storage. For example, the introduction of new and more powerful versions of Apple's iPhone and iPad and devices based on Google's Android operating system, have helped drive the growth of the mobile games market. We do not control the timing of these device launches. Some manufacturers give us access to their new devices prior to commercial release. If one or more major manufacturers were to stop providing us access to new device models prior to commercial release, we might be unable to introduce games that are compatible with the new device when the device is first commercially released, and we might be unable to make compatible games for a substantial period following the device release. If we do not adequately build into our title plan the demand for games for a particular mobile device, experience game launch delays, or miss the opportunity to sell games when new mobile devices are shipped or our end users upgrade to a new mobile device, our revenue would likely decline and our business, operating results and financial condition would likely suffer.

If the mobile gaming market does not continue to grow, our business could be adversely affected.

Our future success is substantially dependent upon the continued growth of the mobile gaming market. The mobile gaming market has experienced significant revenue growth during the last several years despite an overall flattening of downloads of games on the appstores. The mobile gaming industry may not continue to grow at historical rates which could negatively impact our business. In addition, new and emerging technologies could make the mobile devices on which our games are currently released obsolete, requiring us to transition our business model to develop games for other next-generation platforms.

Changes to digital platforms' rules relating to "loot boxes," or the potential adoption of regulations or legislation impacting loot boxes, could require us to make changes to some of our games' economies or design, which could negatively impact the monetization of these games and harm our revenues.

In December 2017, Apple updated its terms of service to require publishers of applications that include "loot boxes" to disclose the odds of receiving each type of item within the loot box to customers prior to purchase, and Google similarly updated its terms of service in May 2019. Loot boxes are a commonly used monetization technique in free-to-play mobile games in which a player can acquire a virtual loot box, typically through game play or by using virtual currency, but the player does not know which virtual item(s) he or she will receive (which may be a common, rare or extremely rare item, and may be a duplicate of an item the player already has in his or her inventory) until the loot box is opened. The player will always receive one or more virtual items when he or she opens the loot box, but the player does not know exactly which item(s) until the loot box is opened. We utilize loot boxes in some of our top games including our *Tap Sports Baseball* franchise and *Kim Kardashian: Hollywood*, and we intend to use loot boxes in our upcoming *Disney Sorcerer's Arena* title. We have updated our applicable games to comply with Apple's and Google's rules relating to loot boxes and do not believe that this has had a material impact on the monetization of our games that utilize loot boxes. However, in the event that Apple or Google changes its terms of service to include more onerous requirements or if Apple or Google were to prohibit the use of loot boxes in games distributed on its digital platform, it would require us to redesign the economies of the affected games and would likely cause our revenues generated from these games to decline. In April 2018, each of the Belgian Gaming Commission and the Dutch Gambling Authority declared that loot boxes as implemented in certain of the games that they reviewed constituted illegal gambling under its respective laws. While neither of these bodies reviewed any of our games, we may be required to modify the implementation of loot boxes to continue utilizing loot boxes in these jurisdictions, remove loot boxes from our games published in these jurisdictions or cease publishing games containing loot boxes in these jurisdictions. In addition, the FTC held a public workshop in August 2019 to examine consumer protection issues related to loot boxes, and various other jurisdictions, including Australia, the United Kingdom, and the states of California, Hawaii, Minnesota and Washington, are reviewing or have indicated that they intend to review the legality of loot boxes and whether they constitute gambling. Furthermore, in May 2019, U.S. Senators Josh Hawley, Ed Markey and Richard Blumenthal introduced a bill to the Senate that would prohibit loot boxes and pay-to-win micro-transactions in "minor oriented" games. To the extent that a federal law, the FTC or other jurisdictions determine that loot boxes constitute gambling or they otherwise elect to regulate the use of loot boxes, it could require us to stop utilizing loot boxes within our games that are distributed in such territories, which would negatively impact our revenues.

Our business is subject to increasing governmental regulation. If we do not successfully respond to these regulations, our business may suffer.

We are subject to a number of domestic and foreign laws and regulations that affect our business. Not only are these laws constantly evolving, which could result in their being interpreted in ways that could harm our business, but legislation is also continually being introduced that may affect both the content of our products and their distribution. In the United States, for example, numerous federal and state laws have been introduced which attempt to restrict the content or distribution of games. Legislation has been adopted in several states, and proposed at the federal level, that prohibits the sale of certain games to minors. If such legislation is adopted, it could harm our business by limiting the games we are able to offer to our customers or by limiting the size of the potential market for our games. In addition, there have been calls from the President of the United States and other U.S. government officials to examine violence in video games in light of recent mass shootings. We may also be required to modify certain games or alter our marketing strategies to comply with new and possibly inconsistent regulations, which could be costly or delay the release of our games, for example to comply with labeling requirements for our free-to-play games. Additionally, if the FTC or any other significant regulatory body issues rules significantly restricting or even prohibiting in-app purchases or any other key aspect of our business, it would significantly impact our business strategy. In addition, two self-regulatory bodies in the United States (the Entertainment Software Rating Board) and in the European Union (Pan European Game Information (PEGI)) provide consumers with rating information on various products such as entertainment software similar to our products based on the content (for example, violence, sexually explicit content, language). Furthermore, the Chinese government has adopted measures designed to eliminate violent or obscene content in games, along with

regulations that may require us to obtain approval from certain government agencies in China, including the Ministry of Culture and General Administration of Press and Publication, in order to continue to publish any of our games in China. Any one or more of these factors could harm our business by limiting the products we are able to offer to our customers, by limiting the size of the potential market for our products, or by requiring costly additional differentiation between products for different territories to address varying regulations.

Furthermore, the growth and development of free-to-play gaming and the sale of virtual goods may prompt calls for more stringent consumer protection laws that may impose additional burdens on companies such as ours. We anticipate that scrutiny and regulation of our industry will increase and that we will be required to devote legal and other resources to addressing such regulation. For example, existing laws or new laws regarding the regulation of currency and banking institutions may be interpreted to cover virtual currency or goods. If that were to occur we may be required to seek licenses, authorizations or approvals from relevant regulators, the granting of which may depend on us meeting certain capital and other requirements and we may be subject to additional regulation and oversight, all of which could significantly increase our operating costs. Changes in current laws or regulations or the imposition of new laws and regulations in the United States or elsewhere regarding these activities may dampen the growth of free-to-play gaming and impair our business.

We sometimes offer our players various types of sweepstakes, giveaways and promotional opportunities, and have allowed players to compete against each other in tournaments for cash prizes. We are subject to laws in a number of jurisdictions concerning the operation and offering of such activities and games, many of which are still evolving and could be interpreted in ways that could harm our business. For example, a March 2018 ruling from the 9th Circuit found that the mobile social casino game *Big Fish Casino* constituted gambling under Washington state law. Any future court ruling or other governmental action that imposes liability on providers of online services could result in criminal or civil liability and could harm our business.

In addition, because our services are available worldwide, certain foreign jurisdictions and others may claim that we are required to comply with their laws, including in jurisdictions where we have no local entity, employees or infrastructure.

The laws and regulations concerning data privacy and data security are continually evolving, and our actual or perceived failure to comply with these laws and regulations could harm our business.

We are subject to federal, state and foreign laws regarding privacy and the protection of the information that we collect regarding our users, which laws are currently in a state of flux and likely to remain so for the foreseeable future. The U.S. government, including the FTC and the Department of Commerce, is continuing to review the need for greater regulation over collecting information concerning consumer behavior on the Internet and on mobile devices. The European Union's General Data Protection Regulation, which became effective in May 2018, the California Consumer Privacy Act of 2018, which became effective in January 2020, and other laws, like the Brazilian Personal Data Protection Bill of Law, create new individual privacy rights and impose worldwide obligations on companies handling personal data, which has resulted, or will result, in a greater compliance burden for us and other companies and could result in us incurring substantial monetary penalties if we are found to be in violation of these laws and regulations. Various U.S. state and federal regulators have also continued to expand the scope of data elements worthy of, and subject to, privacy protections, creating a multi-layered regulation regime that may be applicable to our business and will require time and resources to address. Additionally, the Children's Online Privacy Protection Act requires companies to obtain parental consent before collecting personal information from children under the age of 13. If we do not follow existing laws and regulations, as well as the rules of the smartphone platform operators, with respect to privacy-related matters, or if consumers raise any concerns about our privacy practices, even if unfounded, it could damage our reputation and operating results. Furthermore, new or the interpretation of existing laws, policies, or industry codes could prevent us from offering, or make it costlier or more difficult to offer services in certain jurisdiction.

All of our games are subject to our privacy policy and our terms of service located on our corporate website. If we fail to comply with our posted privacy policy, terms of service or privacy-related laws and regulations, including with respect to the information we collect from users of our games, it could result in proceedings against us by governmental

authorities or others, which could harm our business. In addition, interpreting and applying data protection laws to the mobile gaming industry is often unclear. These laws may be interpreted and applied in conflicting ways from state to state, country to country, or region to region, and in a manner, that is not consistent with our current data protection practices. Complying with these varying requirements could cause us to incur additional costs and change our business practices. Additionally, a violation of applicable data privacy or data security laws by third parties we work with might also have an adverse effect on our business, financial condition or results of operations. Further, if we fail to adequately protect our users' privacy and data, it could result in a loss of player confidence in our services and ultimately in a loss of users, which could adversely affect our business.

In the area of information security and data protection, many states and foreign jurisdictions have passed laws requiring notification to users when there is a security breach for personal data or requiring the adoption of minimum information security standards that are often vaguely defined and difficult to implement. Costs to comply with these laws may increase as a result of changes in interpretation. Furthermore, any failure on our part to comply with these laws may subject us to significant liabilities. The security measures we have in place to protect our data and the personal information of our employees, customers and partners could be breached due to cyber-attacks initiated by third party hackers, employee error or malfeasance, fraudulent inducement of our employees to disclose sensitive information or otherwise. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any breach or unauthorized access could materially interfere with our operations or our ability to offer our services or result in significant legal and financial exposure, damage to our reputation and a loss of confidence in the security of our data, which could have an adverse effect on our business and operating results.

“Cheating” programs, scam offers, black-markets and other offerings or actions by unrelated third parties that seek to exploit our games and players affect the game-playing experience and may lead players to stop playing our games or divert revenue to unrelated third parties.

Unrelated third parties have developed, and may continue to develop, “cheating” programs, scam offers, black-markets and other offerings that may decrease our revenue generated from our virtual economies, divert our players from our games or otherwise harm us. Cheating programs enable players to exploit vulnerabilities in our games to obtain virtual currency or other items that would otherwise generate in-app purchases for us, play the games in automated ways or obtain unfair advantages over other players who do play fairly. Unrelated third parties attempt to scam our players with fake offers for virtual goods or other game benefits. In addition, we recently announced that we intend to explore the extension of *Design Home* and *Tap Sports Baseball* to the browser, and a browser-enabled version of these titles may contain vulnerabilities that we don't anticipate which could significantly impact our top two revenue generating titles. We devote resources to discover and disable these programs and activities, but if we are unable to do so in a prompt and timely manner, our operations may be disrupted, our reputation damaged and players may play our games less frequently or stop playing our games altogether. This may lead to lost revenue from paying players, increased cost of developing technological measures to combat these programs and activities, legal claims, and increased customer service costs needed to respond to disgruntled players.

Some of our players may make sales or purchases of virtual goods used in our games through unauthorized or fraudulent third-party websites, which may reduce our revenue.

Virtual goods in our games have no monetary value outside of our games. Nonetheless, some of our players may make sales and/or purchases of our virtual goods, such as virtual currency for our *Tap Sports Baseball* games, through unauthorized third-party sellers in exchange for real currency. These unauthorized or fraudulent transactions are usually arranged on third-party websites and the virtual goods offered may have been obtained through unauthorized means such as exploiting vulnerabilities in our games, from scamming our players with fake offers for virtual goods or other game benefits, or from credit card fraud. We do not generate any revenue from these transactions. These unauthorized purchases and sales from third-party sellers could reduce our revenues by, among other things:

- decreasing revenue from authorized transactions;

- creating downward pressure on the prices we charge players for our virtual currency;
- increasing chargebacks from unauthorized credit card transactions;
- causing us to lose revenue from dissatisfied players who stop playing a particular game;
- increasing costs we incur to develop technological measures to curtail unauthorized transactions;
- resulting in negative publicity or harm our reputation with players and partners; and
- increasing customer support costs to respond to dissatisfied players.

To discourage unauthorized purchases and sales of our virtual goods, we state in our terms of service that the buying or selling of virtual currency and virtual goods from unauthorized third party sellers may result in bans from our games or legal action. We have banned players as a result of such activities. We have also employed technological measures to help detect unauthorized transactions and continue to develop additional methods and processes by which we can identify unauthorized transactions and block such transactions. However, there can be no assurance that our efforts to prevent or minimize these unauthorized or fraudulent transactions will be successful.

If we do not adequately protect our intellectual property rights, it may be possible for third parties to obtain and improperly use our intellectual property and our business and operating results may be harmed.

Our intellectual property is essential to our business. We rely on a combination of patent, copyright, trademark, trade secret and other intellectual property laws and contractual restrictions on disclosure to protect our intellectual property rights. To date, we have only thirteen issued U.S. patents and five U.S. patent applications currently outstanding, including two that we inherited through acquisitions, so we will not be able to protect the majority of our technologies from independent invention by third parties. In addition, we have filed foreign patent applications on two of the issued U.S. patents.

Despite our efforts to protect our intellectual property rights, unauthorized parties may attempt to copy or otherwise obtain and use our technology and games, and some parties have distributed “jail broken” versions of our games where all of the content has been unlocked and made available for free. Further, some of our competitors have released games that are nearly identical to successful games released by their competitors in an effort to confuse the market and divert users from the competitor’s game to the copycat game. To the extent third parties copy our games, it could reduce the amount of revenue we are able to generate from any infringed games. Monitoring unauthorized use of our games is difficult and costly, and we cannot be certain that the steps we have taken will prevent piracy and other unauthorized distribution and use of our technology and games, particularly in certain international jurisdictions, such as China, where the laws may not protect our intellectual property rights as fully as in the United States. We may institute litigation to enforce our intellectual property rights, which could result in substantial costs and divert our management’s attention and our resources.

In addition, although we require our third-party developers to sign agreements not to disclose or improperly use our trade secrets, to acknowledge that all inventions, trade secrets, works of authorship, developments and other processes generated by them on our behalf are our property and to assign to us any ownership they may have in those works, it may still be possible for third parties to obtain and improperly use our intellectual properties without our consent. This could harm our brand, business, operating results and financial condition.

We are, and in the future may become, involved in intellectual property disputes, which may disrupt our business, require us to pay significant damage awards and could limit our ability to use certain technologies in the future.

Third parties may sue us for intellectual property infringement, or initiate proceedings to invalidate our intellectual property, which, if successful, could disrupt our business, cause us to pay significant damage awards or require us to pay licensing fees. For example, in July 2018, SwiftLife, Inc. filed a complaint in the U.S. District Court for the Eastern District of New York against us, our wholly owned subsidiary Glu Games Inc., and Taylor Swift, Taylor Swift Productions, Inc. and TAS Rights Management, LLC. The complaint alleged eight causes of action, including that

Glu and the other defendants infringe the plaintiff's federally registered trademark, SwiftLife. While we were able to successfully resolve this matter without paying any amounts to the plaintiff, the outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors. In addition, any claims brought against us in the future could result in our being enjoined from using our intellectual property or licensed intellectual property, and we might incur significant licensing fees and could be forced to develop alternative technologies. We may also be required to pay penalties, judgments, royalties or significant settlement costs. If we fail or are unable to develop non-infringing technology or games or to license the infringed or similar technology or games on a timely basis, we may be forced to withdraw games from the market or be prevented from introducing new games. We might also incur substantial expenses in defending against third-party claims, regardless of their merit.

In addition, we use open source software in some of our games and expect to continue to use open source software in the future. We may face claims from companies that incorporate open source software into their products, claiming ownership of, or demanding release of, the source code, the open source software and/or derivative works that were developed using such software, or otherwise seeking to enforce the terms of the applicable open source license. These claims could also result in litigation, require us to purchase a costly license or require us to devote additional research and development resources to change our games, any of which would have a negative effect on our business and operating results.

We are, and in the future may become a party to litigation and regulatory inquiries, which could result in an unfavorable outcome and have an adverse effect on our business, financial condition, results of operation and cash flows.

We are, and may become in the future, subject to various legal proceedings, claims and regulatory inquiries that arise out of the ordinary conduct of our business. The outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors. In addition, events may occur that give rise to a potential risk of litigation. The number and significance of regulatory inquiries have increased as our business has grown and evolved. Any proceedings, claims or inquiries initiated by or against us, whether successful or not, may be time consuming; result in costly litigation, damage awards, consent decrees, injunctive relief or increased costs of doing business, require us to change our business practices or products, require significant amounts of management time, result in diversion of significant operations resources or otherwise harm our business and future financial results.

Unanticipated changes in our income tax rates or exposure to additional tax liabilities may affect our future financial results.

Our future effective income tax rates may be favorably or unfavorably affected by unanticipated changes in the valuation of our deferred tax assets and liabilities, or by changes in tax laws or their interpretation. Determining our worldwide provision for income taxes requires significant judgments. The estimation process and applicable laws are inherently uncertain, and our estimates are not binding on tax authorities. Our effective tax rate could also be adversely affected by a variety of factors, many of which are beyond our control. Recent and contemplated changes to U.S. tax laws, including limitations on a taxpayer's ability to claim and utilize foreign tax credits and defer certain tax deductions until earnings outside of the United States are repatriated to the United States, could impact the tax treatment of our foreign earnings. Further, the taxing authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, including our transfer pricing, or determine that the manner in which we operate our business is not consistent with the manner in which we report our income to the jurisdictions, which could increase our worldwide effective tax rate and unfavorably impact our financial position and results of operations. Foreign tax authorities may also interpret or change tax regulations such that we may be subject to tax liabilities upon closure or liquidation of a foreign subsidiary. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Service and state and foreign tax authorities. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine if our provision for income taxes is adequate. These continuous examinations may result in unforeseen tax-related liabilities, which may unfavorably impact our future financial results.

We must charge, collect and/or pay taxes other than income taxes, such as payroll, value-added, sales and use, net worth, property and goods and services taxes, in both the United States and foreign jurisdiction. If tax authorities assert that we have taxable nexus in a jurisdiction, they may seek to impose past as well as future tax liability and/or penalties. Any such impositions could also cause significant administrative burdens and decrease our future sales. Moreover, state and federal legislatures have been considering various initiatives that could change our tax position regarding sales and use taxes.

Finally, as we change our international operations, adopt new products and new distribution models, implement changes to our operating structure or undertake intercompany transactions in light of changing tax laws, our tax expense could increase.

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

Our principal offices are located in the San Francisco Bay Area, an area known for earthquakes. We are also vulnerable to damage from other types of disasters, including power loss, fires, explosions, floods, communications failures, terrorist attacks and similar events. If any natural or other disaster were to occur, our ability to operate our business could be impaired.

Our stock price has fluctuated and may continue to do so. Our stock price may be affected by third party data regarding our games.

The trading price of our common stock has fluctuated in the past and may continue to fluctuate in the future, as a result of a number of factors, many of which are outside our control, such as changes in the operating performance and stock market valuations of other technology companies generally, or those in our industry in particular, such as Activision, Electronic Arts, and Zynga. We also experience stock price volatility as security analysts and investors base their views and monitor the performance of our games on third party data, like App Annie, AppData, Apptopia, comScore, or SensorTower. Third parties publish daily data about us and other mobile gaming companies with respect to downloads of our games, daily and monthly active users and estimated revenue generated by our games. These metrics can be volatile, particularly for specific games, and in many cases do not accurately reflect the actual levels of usage of our games across all platforms or the revenue generated by our games.

In addition, The Nasdaq Global Select Market on which our common stock is listed has in the past experienced extreme price and volume fluctuations that have affected the market prices of many companies, some of which appear to be unrelated or disproportionate to their operating performance. These broad market fluctuations could adversely affect the market price of our common stock. In the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. Securities class action litigation against us could result in substantial costs and divert our management's attention and resources.

If securities or industry analysts do not publish research about our business, or publish negative or misinformed reports about our business, our share price and trading volume could decline and/or become more volatile.

The trading market for our common stock is affected by the research and reports that securities or industry analysts publish about our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or lower their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline. In addition, our share price and the volatility of our shares can be affected by misinformed or mistaken research reports on our business.

Sales of substantial amounts of our common stock in the public markets, or the perception that such sales might occur, could reduce the price that our common stock might otherwise attain and may dilute existing stockholders' voting power and ownership interest in us.

The market price of shares of our common stock could decline as a result of substantial sales of our common stock, particularly sales by our directors and their affiliates, executive officers, employees and significant stockholders, under our current shelf registration statements, through a large number of shares of our common stock becoming available for sale, or the perception in the market that holders of a large number of shares intend to sell their shares. For example, Tencent is free to sell the 21,000,000 shares it acquired from us in the second quarter of 2015 on the open-market, subject only to our black-out periods and other limitations under our insider trading policy.

Some provisions in our certificate of incorporation and bylaws, as well as Delaware law, may deter third parties from seeking to acquire us.

Our certificate of incorporation and bylaws contain provisions that may make the acquisition of our company more difficult without the approval of our board of directors, including the following:

- our board of directors is classified into three classes of directors with staggered three-year terms;
- only our chairman of the board, our lead independent director, our Chief Executive Officer, our president or a majority of our board of directors is authorized to call a special meeting of stockholders;
- our stockholders are able to take action only at a meeting of stockholders and not by written consent;
- only our board of directors and not our stockholders is able to fill vacancies on our board of directors;
- our certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval; and
- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before a meeting of stockholders.

In addition, as a Delaware corporation, we are subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation Law, which prevents certain stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of at least two-thirds of our outstanding common stock not held by such 15% or greater stockholder, although our board of directors waived this provision with respect to Tencent's potential acquisition of greater than 15% of our shares in connection with the transaction in which we initially sold shares of our common stock to an affiliate of Tencent.

We have no plans to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not have any plans to pay cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

We lease our San Francisco, California corporate headquarters, an office building of approximately 61,400 square feet. The San Francisco facility currently accommodates our principal executive, marketing, business development, human resources, finance, legal, information technology and administrative activities, two of our development studios, and other development activities.

We lease additional domestic office space in Foster City and Burlingame, California. We lease offices for our foreign operations in: Toronto, Canada and Hyderabad, India. These additional domestic and international facilities primarily accommodate development studios, and customer care activities, and total approximately 74,600 square feet.

We believe our space is adequate for our current needs and that suitable additional or substitute space will be available to accommodate the foreseeable expansion of our operations. See Note 9 of the Notes to Consolidated Financial Statements in Item 8 of this report for more information about our lease commitments.

Item 3. *Legal Proceedings*

From time to time, we are subject to various claims, complaints and legal actions in the normal course of business. We are not currently party to any pending litigation, the outcome of which will have a material adverse effect on our operations, financial position or liquidity. However, the ultimate outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on us because of defense costs, potential negative publicity, diversion of management resources and other factors.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

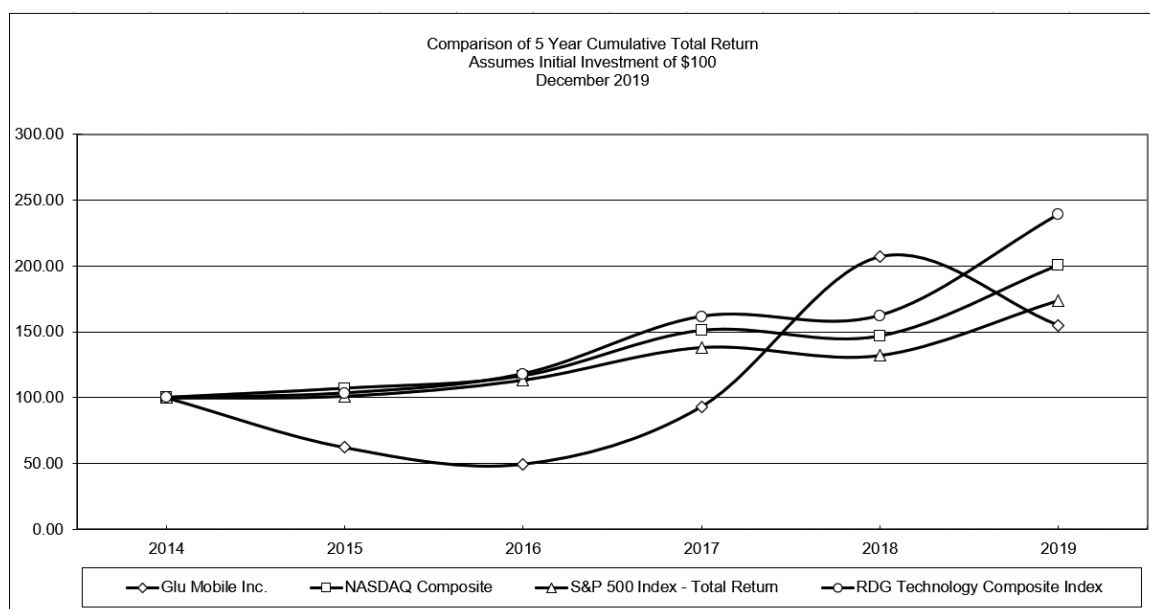
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information for Common Stock

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "GLUU" since our initial public offering in March 2007.

Stock Price Performance Graph

The following graph shows a comparison from December 31, 2014 through December 31, 2019 of the cumulative total return for an investment of \$100 (and the reinvestment of dividends) in our common stock, the Nasdaq Composite Index, S&P 500 Index, and RDG Technology Composite Index. Such returns are based on historical results and are not intended to suggest future performance.



The information under the heading "Stock Price Performance Graph" shall not be deemed "soliciting material" or to be "filed" for purposes of Section 18 of the Exchange Act of 1934, and shall not be incorporated by reference into any registration statement or other document filed by us with the SEC, whether made before or after the date of this report, regardless of any general incorporation language in such filing, except as expressly set forth by specific reference in such filing.

Stockholders

As of February 18, 2020, we had approximately 48 record holders of our common stock and thousands of additional beneficial holders.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our Board of Directors.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. Selected Financial Data

The following selected consolidated financial data should be read in conjunction with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” Item 8, “Financial Statements and Supplementary Data,” and other financial data included elsewhere in this report. Our historical results of operations are not necessarily indicative of results of operations to be expected for any future period.

	Year Ended December 31,				
	2019	2018	2017	2016	2015
	(In thousands, except per share amounts)				
Consolidated Statements of Operations Data:					
Revenue	\$ 411,381	\$ 366,561	\$ 286,827	\$ 200,581	\$ 249,900
Cost of revenue:					
Platform commissions, royalties and other	140,655	128,445	103,499	75,239	95,682
Impairment of prepaid royalties and minimum guarantees	457	711	27,323	30,107	2,502
Impairment and amortization of intangible assets	4,387	9,119	10,331	14,792	9,553
Total cost of revenue	145,499	138,275	141,153	120,138	107,737
Gross profit	265,882	228,286	145,674	80,443	142,163
Operating expenses (1):					
Research and development	95,127	94,934	92,420	81,879	72,856
Sales and marketing	140,298	113,860	104,356	48,050	48,240
General and administrative	23,216	31,667	34,425	30,225	26,092
Amortization of intangible assets	—	—	—	—	201
Restructuring charge	—	240	6,019	2,279	1,075
Total operating expenses	258,641	240,701	237,220	162,433	148,464
Income/(Loss) from operations	7,241	(12,415)	(91,546)	(81,990)	(6,301)
Interest and other income/(expense), net	2,101	(235)	(6,850)	(5,751)	(743)
Income/(Loss) before income taxes	9,342	(12,650)	(98,396)	(87,741)	(7,044)
Income tax benefit (provision)	(471)	(549)	826	301	(141)
Net income/(loss)	8,871	(13,199)	(97,570)	(87,440)	(7,185)
Net income/(loss) per share:					
Basic	\$ 0.06	\$ (0.09)	\$ (0.72)	\$ (0.66)	\$ (0.06)
Diluted	\$ 0.06	\$ (0.09)	\$ (0.72)	\$ (0.66)	\$ (0.06)
Weighted average common shares outstanding:					
Basic	145,838	141,402	135,715	131,804	118,775
Diluted	157,383	141,402	135,715	131,804	118,775

(1) Includes stock-based compensation expense as follows:

Research and development	\$ 10,466	\$ 12,807	\$ 6,460	\$ 4,567	\$ 3,563
Sales and marketing	1,700	2,795	1,289	1,091	1,082
General and administrative	5,217	8,990	7,314	7,605	7,041

	As of December 31,				
	2019	2018	2017	2016	2015
	(In thousands)				
Cash and cash equivalents and short-term investments	\$ 127,053	\$ 97,834	\$ 63,764	\$ 102,102	\$ 180,542
Total assets	418,049	314,433	299,298	339,504	402,986
Total long-term liabilities	64,208	7,191	12,534	22,350	25,932
Total stockholder's equity	\$ 203,087	\$ 177,313	\$ 153,860	\$ 232,814	\$ 306,428

Please see Note 1, Note 3 and Note 10 of our Notes to Consolidated Financial Statements for a discussion of factors such as impairment of prepaid royalties and guarantees, divestiture, and any material uncertainties that may materially affect the comparability of the information reflected in selected financial data, described in Item 6 of this report.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included in Item 8, "Financial Statements and Supplementary Data" of this report. In addition to our historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results and the timing of certain events could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include, but are not limited to, those discussed below and elsewhere in this report, particularly in Item 1A, "Risk Factors."

Our Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, includes the following sections:

- An Overview that discusses at a high level our operating results and some of the trends that affect our business;
- Critical Accounting Policies and Estimates that we believe are important to understanding the assumptions and judgments underlying our financial statements;
- Recent Accounting Pronouncements;
- Results of Operations, including a more detailed discussion of our revenue and expenses; and
- Liquidity and Capital Resources, which discusses key aspects of our statements of cash flows, changes in our balance sheets and our financial commitments.

This MD&A section generally discusses 2019 and 2018 items and year-to-year comparisons between 2019 and 2018. Discussions of 2017 items and year-to-year comparisons between 2018 and 2017 that are not included in this Form 10-K 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 on Form 10-K for the fiscal year ended December 31, 2018.

Overview

This overview provides a high-level discussion of our operating results and some of the trends that affect our business. We believe that an understanding of these trends is important to understanding our financial results for 2019, as well as our future prospects. This summary is not intended to be exhaustive, nor is it intended to be a substitute for the detailed discussion and analysis provided elsewhere in this report, including our consolidated financial statements and accompanying notes.

Financial Results and Trends

Revenue for 2019 was \$411.4 million, a 12.2% increase compared to 2018, in which we reported revenue of \$366.6 million. The increase in total revenue was primarily related to a \$44.4 million increase in our revenue from micro-transactions (in-app purchases) and a \$607,000 increase in our revenue from advertisements and offers. The increase was primarily related to an increase in revenue from Design Home, Covet Fashion, and the Tap Sports Baseball franchise and the worldwide launch of Diner DASH Adventures and WWE Universe during 2019. These increases were partially offset by declining revenue from catalog games such as *Kim Kardashian: Hollywood*, *Restaurant Dash with Gordon Ramsay*, *Cooking Dash*, *Deer Hunter 2018* (originally launched as *Deer Hunter 2016*), *Deer Hunter Classic*, *Kendall & Kylie* and *Racing Rivals*.

We have concentrated our product development efforts towards developing games for smartphone and tablet devices. We generate the majority of our revenue from Apple's iOS platform, which accounted for 60.8% and 63.1% of our total revenue for the years ended December 31, 2019 and 2018, respectively. The majority of this iOS-related revenue was generated through the Apple App Store, which represented 54.4% and 54.7% of our total revenue for the years ended December 31, 2019 and 2018, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our iOS-related revenue from offers and advertisements in games distributed on the Apple App Store. In addition, we generated approximately 39.1% and 36.6% of our total revenue for the years ended December 31, 2019 and 2018, respectively, from the Android platform. The majority of our Android-related revenue was generated through the Google Play Store, which represented 33.5% and 31.3% of our total revenue for the years ended December 31, 2019 and 2018, respectively, with the significant majority of such revenue derived from in-app purchases. We generated the balance of our Android-related revenue from other platforms that distribute apps that run the Android operating system (e.g., the Amazon App Store) and through offers and advertisements in games distributed through the Google Play Store and other Android platforms.

We currently publish titles primarily in four genres: lifestyle, casual, mid-core, and sports and outdoors. We believe these are genres in which we have already established a leadership position, are otherwise aligned with our strengths or are conducive to the establishment of a strong growth game. Across genres, we view our titles as either growth games or catalog games. Growth games are titles that we continue to update with additional content and features and which we expect to grow revenue year over year. We continue to update some of our catalog titles with additional content and features, whereas on others we expend little to no investment in terms of updates and enhancements.

We established our leadership position in the lifestyle genre through our acquisition of Crowdstar Inc. ("Crowdstar") in November 2016 and its successful *Covet Fashion* title, and extended our leadership with our global release of *Design Home* in November 2016. We introduced key updates for *Design Home* in 2018 and 2019, including elite events for elder players, improved series challenges, language localization in German, French and Spanish, and meta game functionality, and are planning key further updates for this title, including the introduction of e-commerce functionality. The casual genre includes our *Kim Kardashian: Hollywood* title and our *Cooking Dash* and *Diner DASH* franchises, and our leadership position in this genre was bolstered by our worldwide launch of *Diner DASH Adventures* in June 2019. The mid-core genre will include our *Disney Sorcerer's Arena* title that is currently available in limited beta territories and which we expect to launch worldwide in the first quarter of 2020. Our leadership in the sports and outdoors category remains strong with our *Tap Sports Baseball* and *Deer Hunter* franchises, and we furthered our leadership with the launch of *MLB Tap Sports Baseball 2019* in March 2019, which includes licensed content from Major League Baseball, or MLB, together with current and former MLB players pursuant to our continuing agreements with the Major League Baseball Players Association, and Major League Baseball Players Alumni Association. We will be releasing *MLB Tap Sports Baseball 2020* in March 2019 in more than 100 additional countries (prior versions of the *Tap Sports Baseball* franchise were only available in the United States, Canada, United Kingdom, Germany and Australia) with new features and content, including authentic major league stadiums, a home run derby mode and a new cover athlete. In 2020, we expect to add to our portfolio of sports and outdoor titles through the worldwide release of the next iteration of our *Deer Hunter* franchise in the second half of 2020 and potentially by globally launching a fishing game that is currently in beta testing.

We believe that our games consistently have high production values, are visually appealing and have engaging core gameplay. These characteristics have typically helped to drive installs and awareness of our games and resulted in highly positive consumer reviews. The majority of our games have been featured on Apple and Google storefronts when they were commercially released, which we believe is the result of us being a good partner of Apple and Google.

We work closely with our celebrity and brand licensors to engage their social media audiences and build games that will resonate with their unique fan bases. For example, our *Kim Kardashian: Hollywood* title utilizes transmedia storytelling, leveraging Ms. Kardashian West's built-in social media fan base to drive installs and awareness of the game, and then attempting to surprise and delight those fans with real-world events and other game content based on her life. Our goal is for the game content to become entwined with Ms. Kardashian West's persona and social media presence, and to otherwise enhance interaction with her fans. We also leverage the strength of well-known brands and licensors to provide users with more realistic experiences, such as the case with *MLB Tap Sports Baseball 2019* which features all MLB clubs and uniforms and current and former MLB players; we intend to further augment the game's authenticity by adding each of the 30 real MLB stadiums in *MLB Tap Sports Baseball 2020*. We also work to build and nurture social communities in and around the games themselves, creating a new vehicle for strong, personal engagement with the brand or celebrity's fan base.

For us to continue driving installs and awareness of our games and to improve monetization and retention of our players, we must ensure that each of our games has compelling gameplay and a deep meta game that motivates users to continue to play our games for months or even years. In addition, we must regularly update our games with compelling new content, deliver socio-competitive features like tournaments, contests, player-versus-player gameplay and live events, and build and nurture communities around our franchises both in-game and holistically via community features such as dedicated social channels. We have also made significant investments in our proprietary analytics and revenue technology infrastructure. With our enhanced analytics capabilities, we intend to devote resources towards segmenting and learning more about the players of each of our franchises and further monetizing our highest spending and most engaged players. We aim to connect our analytics and revenue technology infrastructure to multiple elements of our business – from marketing to merchandising – in order to improve player retention and monetization.

We also plan to continue monitoring the successful aspects of our games to drive downloads and enhance monetization and retention as part of our product strategy, whether by optimizing advertising revenue within each title, securing additional compelling licensing arrangements, building enhanced and more complex core gameplay, adding deep meta game features and additional social features, tournaments and events, offering subscriptions for in game virtual items or otherwise. Optimizing advertising revenue within our games requires us to continue taking advantage of positive trends in the mobile advertising space, particularly as brands continue to migrate budgets from web to mobile. Continuing to drive installs and awareness of our games through licensing efforts requires that we continue to partner with brands, celebrities and social influencers that resonate with potential players of our games. Partnering with desirable licensing partners and renewing our existing licenses with our most successful partners requires that we continue to develop successful games based on licensed content and are able to compete with other mobile gaming companies on financial and other terms in signing such partners. We also plan to continue introducing third-party licensed brands, properties and personalities into our games as additional licensed content, for cameo appearances or for limited time events in order to drive awareness and monetization.

Across the globe, our industry is evidencing that hit titles generally remain higher in the top grossing charts for longer. We believe this is due to the continued specialization and investment of teams and companies in their hit titles, and the live, social nature of certain games. Our strategy and the measures we have implemented to support our business positions us to take advantage of these trends, as evidenced by the continued strength and year over year growth of *Design Home*, *Covet Fashion*, and the *Tap Sports Baseball* franchise. We plan to continue to regularly update and otherwise support our growth games in order to ensure that those games monetize and retain users for even longer periods of time. In addition, we plan to continue to invest in our creative leaders and the creative environments in which they and their teams work to increase our likelihood of creating significant hit growth games.

Our net income in the year ended December 31, 2019 was \$8.9 million versus a net loss of \$13.2 million in the year ended December 31, 2018. This change was primarily due to an increase in revenue of \$44.8 million, a decrease in general and administrative expense of \$8.5 million and an increase in interest/other income of \$2.3 million. These changes were partially offset by an increase in sales and marketing expense of \$26.4 million and an increase in cost of sales of \$7.2 million. Our operating results were also affected by fluctuations in foreign currency exchange rates of the currencies in which we incurred meaningful operating expenses (principally the Canadian Dollar, and Indian Rupee), and our customers' reporting currencies.

Our ability to sustain and increase profitability depends not only on our ability to grow our revenue, but also on our ability to manage our operating expenses. We significantly increased our sales and marketing expenditures during 2019 compared to 2018, which was primarily related to higher marketing spend for our growth games and higher user acquisition expenditures related to the global launches of *Diner DASH Adventures* and *WWE Universe* partially offset by lower marketing expense for some of our catalog titles. We expect our sales and marketing expenses to increase in 2020 primarily due to higher user acquisition expenditures, including related to the launch of our new titles, including *Disney Sorcerer's Arena*, *Originals: Interactive Story Series* and the next iteration of our *Deer Hunter* franchise. Additionally, the largest component of our recurring expenses is personnel costs, which consist of salaries, benefits and incentive compensation, including bonuses and stock-based compensation. In 2020, we intend to continue to focus on reducing our operating costs where appropriate to be more efficient. These efforts may be partially offset by our plans to continue hiring additional development personnel in the San Francisco Bay Area and in Hyderabad, India.

Cash and cash equivalents at December 31, 2019 totaled \$127.1 million, an increase of \$29.3 million from the \$97.8 million balance at December 31, 2018. This increase was primarily related to \$35.2 million of cash generated from operations, which was partially offset by \$5.4 million of cash used in investing activities and \$0.4 million of cash used in financing activities.

Key Operating Metrics

We manage our business by tracking various non-financial operating metrics that give us insight into user behavior in our games. The three metrics that we use most frequently are Daily Active Users (DAU), Monthly Active Users (MAU), and Average Revenue Per Daily Active User (ARPDau). Our methodology for calculating DAU, MAU, and ARPDau may differ from the methodology used by other companies to calculate similar metrics.

DAU is the number of individuals who played a particular smartphone game on a particular day. An individual who plays two different games on the same day is counted as two active users for that day when we aggregate DAU across games. In addition, an individual who plays the same game on two different devices during the same day (e.g., an iPhone and an iPad) is also counted as two active users for each such day when we average or aggregate DAU over time. Average DAU for a particular period is the average of the DAUs for each day during that period. We use DAU as a measure of player engagement with the titles that our players have downloaded.

MAU is the number of individuals who played a particular smartphone game in the month for which we are calculating the metric. An individual who plays two different games in the same month is counted as two active users for that month when we aggregate MAU across games. In addition, an individual who plays the same game on two different devices during the same month (e.g., an iPhone and an iPad) is also counted as two active users for each such month when we average or aggregate MAU over time. Average MAU for a particular period is the average of the MAUs for each month during that period. We use the ratio between DAU and MAU as a measure of player retention.

ARPDau is total free-to-play smartphone revenue – consisting of micro-transactions, advertisements and offers – for the measurement period divided by the number of days in the measurement period divided by the DAU for the measurement period. ARPDau reflects game monetization. Under our revenue recognition policy, we recognize this revenue over the estimated average playing period of a user, but our methodology for calculating our DAU does not align with our revenue recognition policy for micro-transactions and offers, under which we defer revenue. For example, if a title is introduced in the last month of a quarter, we defer a substantial portion of the micro-transaction and offer revenue to future months, but the entire DAU for the newly released title is included in the month of launch.

We calculate DAU, MAU and ARPDau for only our primary distribution platforms, Apple's App Store, the Google Play Store and Amazon's Appstore, as well as from Facebook for certain titles; we are not able to calculate these metrics across all of our distribution channels. In addition, the platforms that we include for purposes of this calculation have changed over time, and we expect that they will continue to change as our business evolves, but we do not expect that we will adjust prior metrics to take any such additions or deletions of distribution platforms into account. We believe that calculating these metrics for only our primary distribution platforms at a given period is generally representative of the metrics for all of our distribution platforms. Moreover, we rely on the data analytics software that we incorporate into our games to calculate and report the DAU, MAU and ARPDau of our games, and we make certain adjustments to the analytics data to address inconsistencies between the information as reported and our DAU and MAU calculation methodology.

We have estimated the DAU and MAU for certain older titles because the analytics tools incorporated into those titles are incompatible with newer device operating systems (e.g., iOS 13), preventing us from collecting complete data. For these titles, we estimate DAU and MAU by extrapolating from each affected title's historical data using a fixed decay rate in light of the behavior of similar titles for which we had complete data.

As of January 1, 2019, we began calculating DAU and MAU using the average of each month during the period rather than our historical practice of calculating these metrics based on the last month of the period. For example, DAU for the three months ended December 31, 2019 is calculated as an average of aggregate daily DAU for the months of October 2019, November 2019 and December 2019 calculated for all active smartphone free-to-play titles during those months across the distribution platforms for which we calculate the metric. We adopted this new methodology because we believe that it provides a more accurate representation of overall DAU and MAU for the applicable period and more closely aligns with the methodology used by other companies in the gaming industry to calculate similar metrics.

	Metrics calculated using the new methodology							
	Three Months Ended,							
	2019				2018			
	Dec 31	Sep 30	Jun 30	Mar 31	Dec 31	Sep 30	Jun 30	Mar 31
Aggregate DAU	2,903	3,288	3,230	3,150	3,179	3,630	3,716	3,659
Aggregate MAU	15,599	18,675	19,065	19,118	19,618	22,048	23,166	25,181
Aggregate ARPDau	\$ 0.42	\$ 0.35	\$ 0.33	\$ 0.34	\$ 0.33	\$ 0.30	\$ 0.27	\$ 0.25

	Metrics calculated using the old methodology							
	Three Months Ended,							
	2019				2018			
	Dec 31	Sep 30	Jun 30	Mar 31	Dec 31	Sep 30	Jun 30	Mar 31
Aggregate DAU	2,857	3,112	3,267	3,016	3,214	3,408	3,627	3,585
Aggregate MAU	15,686	16,373	19,819	18,620	21,113	19,415	22,817	24,787
Aggregate ARPDau	\$ 0.43	\$ 0.37	\$ 0.32	\$ 0.35	\$ 0.32	\$ 0.32	\$ 0.27	\$ 0.25

The decrease in aggregate DAU and MAU for the three months ended December 31, 2019 as compared to the same period of the prior year was primarily related to fewer downloads across our portfolio of games.

Our aggregate ARPDau increased for the three months ended December 31, 2019 as compared to the same period of the prior year, as we improved monetization on certain titles, particularly through increased content updates and use of social features in those games. Future increases in our aggregate DAU, MAU and ARPDau will depend on our ability to retain current players, attract new paying players, launch new games and expand into new markets and distribution platforms.

We rely on a very small portion of our total users for nearly all of our revenue derived from in-app purchases. Since the launch of our first free-to-play titles in the fourth quarter of 2010, the percentage of unique paying users for our largest revenue-generating free-to-play games has typically been less than 5%, when measured as the number of unique paying users on a given day divided by the number of unique users on that day, though this percentage fluctuates, and it may be higher than 5% for certain of our games during specific, relatively short time periods, such as immediately following worldwide launch or the week following content updates, marketing campaigns or certain other events.

Significant Transactions

Divestiture of Moscow Studio

On December 31, 2017, we entered into the following agreements related to the divestiture of our Moscow-based game development studio (the “Moscow Studio”) through the sale of our wholly-owned UK subsidiary Glu Mobile (Russia) Limited (“GMRL”):

- Share Purchase Agreement (the “SPA”) between Glu and Saber Interactive (“Saber”);
- Transitional Services Agreement (the “TSA”) among Glu, Saber and MGL. My.com (Cyprus) Limited (“MGL”); and
- Asset Purchase and License Agreement (the “APLA”) between Glu and MGL.

Pursuant to the SPA, Saber purchased all the issued and outstanding share capital of GMRL. Saber also assumed all obligations under the office lease for the Moscow Studio.

Under the TSA, Saber agreed to transition certain legacy titles from the Moscow Studio to our Hyderabad studio. Upon successful completion of the transition (i) Saber paid the employees of the Moscow Studio and GMRL bonus payments of \$500,000 in the aggregate and reduced the cash consideration by the amount of the bonus, and (ii) certain employees of the Moscow Studio and GMRL had the vesting of an aggregate of approximately 147,000 shares subject to equity awards accelerated.

Pursuant to the APLA, we sold four mobile games (and related intellectual property and other rights) developed by the Moscow Studio: (i) *Last Day Alive*, (ii) *Heroes of Destiny*, (iii) a game that was in development featuring a male celebrity, and (iv) *Furiosa*. We transferred all of our rights and obligations under certain contracts related to the game featuring a male celebrity, including, but not limited to, the obligation to pay the remaining approximately \$1.5 million in minimum guarantee and other payments under these contracts. We also agreed to provide MGL with a non-exclusive, perpetual, worldwide, irrevocable, non-transferrable, royalty-free license to certain development tools and technology necessary to use, develop, publish, exploit and sell the purchased games and that MGL and/or its affiliates may use for the development of other of its products.

The total cash consideration under the SPA and APLA was \$3.2 million, of which we received \$1.7 million in January 2018. The remaining \$1.5 million, net of a transition bonus payment of \$500,000, was received in April 2018 upon completion of the transition of the legacy titles from the Moscow Studio to our Hyderabad studio.

In connection with the divestiture, we recorded a loss of \$6.5 million in the year ended December 31, 2017, which is included in other expense on the consolidated statement of operations. This was primarily comprised of a \$10.0 million charge related to the assignment of one of the contracts related to the male celebrity, a \$1.2 million charge related to the write-off of goodwill associated with the Moscow Studio and a \$0.5 million charge related to the write-off of net assets associated with the Moscow Studio. These charges were partially offset by \$3.2 million in cash paid by Saber and MGL, \$1.5 million related to the assumption of obligations by MGL under the contract related to the male celebrity, and \$0.5 million related to the transition services provided by Saber.

In connection with the activities related to the transition under the TSA that occurred in 2018, we recorded the following expenses in the year ended December 31, 2018:

- \$500,000 related to bonuses that became due to the employees of the Moscow Studio and GMRL;
- \$514,000 related to the vesting of 147,000 shares subject to equity awards held by certain employees of the Moscow Studio and GMRL; and
- \$515,000 related to the amortization of transition services assets that were capitalized as part of the transaction consideration.

Our divestiture of the Moscow studio was part of our efforts to consolidate our studio locations, focusing on a new scaled creative center in San Francisco and a low cost, repeatable location in Hyderabad, India. This divestiture was not presented as discontinued operations in the consolidated statements of operations, because it did not represent a strategic shift in our business and is not expected to have a significant effect on our operations or financial results, as we continued operating similar businesses after the divestiture.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with United States generally accepted accounting principles, or GAAP. These accounting principles require us to make certain estimates and judgments that can affect the reported amounts of assets and liabilities as of the dates of the consolidated financial statements, the disclosure of contingencies as of the dates of the consolidated financial statements, and the reported amounts of revenue and expenses during the periods presented. Although we believe that our estimates and judgments are reasonable under the circumstances existing at the time these estimates and judgments are made, actual results may differ from those estimates, which could affect our consolidated financial statements.

We believe the following to be critical accounting policies because they are important to the portrayal of our financial condition or results of operations and they require critical management estimates and judgments about matters that are uncertain:

- revenue recognition;
- prepaid or guaranteed licensor royalties; and
- stock-based compensation.

Revenue Recognition

We generate revenue through in-application purchases (“in-app purchases”) within our games on smartphones and tablet devices, such as Apple’s iPhone and iPad, and mobile devices utilizing Google’s Android operating system. Users can download our free-to-play games through Digital Storefronts. We also have relationships with certain advertising service providers for advertisements within smartphone games and revenue from these advertising providers is generated through impressions, clickthroughs, banner ads and offers.

We adopted Accounting Standard Codification 606, *Revenue from Contracts with Customers*, (“ASC 606”) and its related amendments effective January 1, 2018 using a modified retrospective method. The reported results for the year ended December 31, 2018 reflect the application of ASC 606 guidance while the reported results for the year ended December 31, 2017 were prepared under the guidance of ASC 605, Revenue Recognition (ASC 605), which is also referred to herein as “legacy GAAP” or the “previous guidance”. The adoption of ASC 606 represents a change in accounting principle that will more closely align revenue recognition with the delivery of our services and will provide financial statement readers with enhanced disclosures.

In accordance with ASC 606, revenue is recognized when a customer obtains control of promised services. The amount of revenue recognized reflects the consideration we expect to receive in exchange for these services. A contract with a customer exists when (i) we enter into an enforceable contract with a customer that defines each party’s rights regarding the services to be transferred and identifies the payment terms related to these services, (ii) the contract has commercial substance and, (iii) we determine that collection of substantially all consideration for services that are transferred is probable based on the customer’s intent and ability to pay the promised consideration. We apply judgment in determining the customer’s ability and intention to pay, which is based on a variety of factors including the customer’s historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

In-App Purchases

Users can download our free-to-play games within the Digital Storefronts and pay to acquire virtual currency, which can be redeemed in the game for virtual goods, or virtual goods directly (together, defined as “virtual items”) to enhance their game-playing experience. We sell both consumable and durable virtual items and receive reports from the Digital Storefronts, which breakdown the various purchases made from our games over a given time period. We review these reports and determine on a per-item basis whether the purchase was a consumable virtual item or a durable virtual item. Consumable virtual items are items that are consumed at a predetermined time or otherwise have limitations on repeated use. Durable virtual items are items, such as furniture, clothes, etc. that are accessible to the player over an extended period of time and that remain in the game for as long as the player continues to play.

The initial download of the mobile game from the Digital Storefront does not create a contract under ASC 606 because of the lack of commercial substance; however, the separate election by the player to make an in-application purchase satisfies the criteria thus creating a contract under ASC 606. We have identified the following performance obligations in these contracts:

- (1) Ongoing game related services such as hosting of game play, storage of customer content, when and if available content updates, maintaining the virtual currency management engine, tracking gameplay statistics, matchmaking as it relates to multiple player gameplay, etc.
- (2) Obligation to the paying player to continue displaying and providing access to the virtual items within the game.

Neither of these obligations are considered distinct since the actual mobile game and the related ongoing services are both required to purchase and benefit from the related virtual items. As such, our performance obligations represent a single combined performance obligation which is to make the game and the ongoing game related services available to the players. The transaction price, which is the amount paid for the virtual items by the player, is allocated entirely to the single combined performance obligation. We recognize revenue for durable virtual items over the estimated average playing period of paying users on a per title basis. Our revenue from consumable virtual items has been insignificant. Based on our analysis, the estimated weighted average useful life of a paying user ranges from four to eight months.

Advertisements and Offers

We have relationships with certain advertising service providers for advertisements within our mobile games. Revenue from these advertising service providers is generated through impressions, clickthroughs, offers and banner ads. Offers are the type of advertisements where the players are rewarded with virtual currency for completing specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. We have determined the advertising buyer to be our customer and displaying the advertisements within the mobile games is identified as the single performance obligation. Revenue from advertisements and offers are recognized at the point-in-time the advertisements are displayed in the game or the offer has been completed by the user as the customer simultaneously receives and consumes the benefits provided from these services.

Other Estimates and Judgments

We compute our estimated average playing period of paying users at least twice each year. We have examined the playing patterns of paying users across a representative sample of our games across various genres.

We use the “survival analysis” model to estimate the average playing period for paying users. This model provides for a singular approach to estimating the average playing period of paying users on a title by title basis for our diverse portfolio of games. It is a statistical model that analyzes time duration until one or more events happens and is commonly used in various industries for estimating lifespans. We believe this is an appropriate model to estimate the average playing period of paying users for our titles as this model statistically estimates the average playing period of each title by analyzing the historical behavior patterns of paying users.

This model requires the stratification of user data into active and inactive paying users on a per title basis. Active users are those who are active in the game for the past 30 days as of the evaluation date. The remaining users are considered inactive and deemed to have churned from the game. These users are treated mathematically differently in the model than those who are still active. A distribution curve is then fit to the user data to estimate the average playing period of paying users on a per title basis.

We have selected a threshold of 120 days from the commercial launch of a title as the minimum number of days of data required for this model. This threshold was deemed to be appropriate as we tested the model using lower thresholds which resulted in inconsistencies in the estimate of the average playing period of paying users. For new titles with less than 120 days of data that share similar attributes with an existing title and/or prequel titles, the average playing period is determined based on the average playing period of that existing title or prequel title, as applicable. For all other titles with less than 120 days of data, the average playing period is determined based on the average playing period of all other remaining existing titles.

While we believe our estimates to be reasonable based on available game player information, we may revise such estimates in the future if a titles' user characteristics change. Any adjustments arising from changes in the estimates of the average playing period for paying users would be applied to the current quarter and prospectively on the basis that such changes are caused by new information that indicates a change in user behavior patterns compared to historical titles. Any changes in our estimates of the useful life of virtual items in a certain title may result in revenue being recognized on a basis different from prior periods' and may cause our operating results to fluctuate.

Principal Agent Considerations

We evaluated our Digital Storefront and advertising service provider agreements under ASC 606 in order to determine if we are acting as the principal or as an agent when selling virtual items or advertisements within our games. We primarily use Digital Storefronts for distributing our smartphone games and for enabling players to purchase virtual items and advertising service providers to serve advertisements within our games. We evaluated the following factors to assess whether we control each specified good or service before that good or service is transferred to the customer:

- the party responsible for the fulfillment of the virtual items, game related services, or serving of advertisements;
- the party having the discretion to set pricing with the end-users; and
- the party having inventory risk before the specified good or service have been transferred to a customer.

Based on the evaluation of the above indicators, we determined that we have control of the services before they are transferred to the end-user. Thus, we are generally acting as a principal and are the primary obligor to end-users for games distributed through Digital Storefronts and advertisements served through our advertising service providers. Therefore, we recognize revenue related to these arrangements on a gross basis, when the necessary information about the gross amounts or platform fees charged, before any adjustments, are made available by the Digital Storefronts and advertising service providers. In situations where the price paid by the end-user of the advertising service provider is not known, we account for these transactions on a net basis.

Deferred Platform Commissions and Royalties

Digital Storefronts retain platform commissions and fees on each purchase made by the paying players through the Digital Storefront. We are also obligated to pay ongoing licensing fees in the form of royalties related to the games developed based on or significantly incorporating licensed brands, properties or other content, and our plans to incorporate additional licensed content in some of its own originally branded games. As revenue from sales to paying players through Digital Storefronts are deferred, the related direct and incremental platform commissions and fees as well as third-party royalties are also deferred on the consolidated balance sheets. The deferred platform commissions and royalties are recognized in the consolidated statements of operations in "Cost of revenue" in the period in which the related sales are recognized as revenue.

Prepaid or Guaranteed Licensor Royalties

Our royalty expenses consist of fees that we pay to content owners for the use of their brands, properties and other licensed content, including trademarks and copyrights, in the development of our games. Royalty-based obligations are either paid in advance and capitalized on the balance sheet as prepaid royalties or accrued as incurred and subsequently paid. These royalty-based obligations are expensed to cost of revenue at the greater of the revenue derived from the relevant game multiplied by the applicable contractual rate or an effective royalty rate based on expected net product sales.

Our contracts with certain licensors include minimum guaranteed royalty payments, which are payable regardless of the ultimate volume of sales to end users, in accordance with ASC 440-10, *Commitments*, or ASC 440. When no significant performance remains with the licensor, we initially record each of these guarantees as an asset and as a liability at the contractual amount. We believe that the contractual amount represents the fair value of the liability. When significant performance remains with the licensor, we record royalty payments as an asset when actually paid and as a liability when incurred, rather than upon execution of the contract. The classification of minimum royalty payment obligations between long-term and short-term is determined based on the expected timing of recoupment of earned royalties calculated on projected revenue for the games that include content licensed from third parties.

Each quarter, we evaluate the realization of our prepaid and guaranteed royalties as well as any unrecognized guarantees not yet paid to determine amounts that we deem unlikely to be realized through product sales. We use estimates of undiscounted revenue and net margins to evaluate the future realization of prepaid royalties, license fees, and guarantees. This evaluation is performed at the title level and considers multiple factors, such as, the term of the agreement, forecasted demand, game life cycle status, game development plans, level of social media activity, and current and anticipated sales levels, as well as other qualitative factors such as the success of similar games and similar genres on mobile devices published by us and our competitors and/or other game platforms (e.g., consoles and personal computers) utilizing the intellectual property. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, we record an impairment charge to cost of revenue in the period that impairment is indicated.

Stock-Based Compensation

We apply the fair value provisions of ASC 718, Compensation - Stock Compensation ("ASC 718"). ASC 718 requires the recognition of compensation expense, using a fair-value based method, for costs related to all stock-based payments including stock options, restricted stock units ("RSUs"), performance-based stock units ("PSUs"), and performance-based stock options ("PSOs"). The number of PSUs and PSOs earned and eligible to vest will be determined based on achievement of specified financial performance measures. ASC 718 requires companies to estimate the fair value of stock-option awards on the grant date using an option pricing model. The fair value of stock options and PSOs and stock purchase rights granted pursuant to our equity incentive plans and 2007 Employee Stock Purchase Plan ("ESPP"), respectively, is determined using the Black-Scholes valuation model. The determination of fair value is affected by the stock price, as well as assumptions regarding subjective variables such as expected employee exercise behavior and expected stock price volatility over the expected term of the award. Generally, these assumptions are based on historical information and judgment is required to determine if historical trends may be indicators of future outcomes.

Effective January 1, 2017 we no longer estimate forfeitures but account for them as and when they occur. Changes to the assumptions used in the Black-Scholes option valuation calculation, as well as future equity granted or assumed through acquisitions could significantly impact the compensation expense we recognize. The cost of RSUs and PSUs is determined using the fair value of the common stock based on the quoted closing price of our common stock on the date of grant. Compensation cost for stock options and RSUs is amortized ratably over the requisite service period. For performance-based awards that have multiple vesting dates, the compensation cost is recognized ratably over the requisite service period for each tranche, whereby each vesting tranche is treated as a separate award for determining the requisite service period. The compensation cost for performance-based awards may be adjusted over the vesting period based on interim estimates of performance against the pre-set financial performance measures.

Results of Operations

The following sections discuss and analyze the changes in the significant line items in our statements of operations for the comparison periods identified.

Comparison of the Years Ended December 31, 2019 and 2018

Revenue

Revenue by Type	Year Ended December 31,	
	2019	2018
	(In thousands)	
In-App Purchases	\$ 360,598	\$ 316,157
Advertisements and Offers	50,728	50,121
Other	55	283
Total revenue	<u>\$ 411,381</u>	<u>\$ 366,561</u>

Our revenue increased \$44.8 million, or 12.2%, from \$366.6 million for the year ended December 31, 2018 to \$411.4 million for the year ended December 31, 2019, which was primarily related to a \$44.4 million increase in our revenue from in-app purchases (micro-transactions) and a \$607,000 increase in our revenues from advertisements and offers. The increase in revenue was primarily related to our three growth games, *Design Home*, the *Tap Sports Baseball* franchise and *Covet Fashion*, as well as the launch of new titles *Diner DASH Adventures* and *WWE Universe* in 2019. Revenue from our three growth games increased by \$58.4 million during the year ended December 31, 2019 compared to the year ended December 31, 2018. Revenue from the new titles launched in 2019 was \$23.8 million during the year ended December 31, 2019. These increases were partially offset by a \$37.4 million aggregate decline in revenue from catalog titles such as *Kim Kardashian: Hollywood*, *Restaurant Dash with Gordon Ramsay*, *Cooking Dash*, *Racing Rivals*, *Deer Hunter 2018* (originally launched as *Deer Hunter 2016*), *Deer Hunter Classic*, and *Kendall & Kylie*, etc.

In 2019, *Design Home*, the *Tap Sports Baseball* franchise and *Covet Fashion* were our top three revenue-generating games and comprised 42.2%, 21.0% and 15.2%, respectively, of our revenue for the period. In 2018, *Design Home*, the *Tap Sports Baseball* franchise, and *Covet Fashion* were our top three revenue-generating games and comprised 39.7%, 18.9% and 13.4%, respectively, of our revenue for the period. No other game generated more than 10% of revenue during either period.

International revenue (defined as revenue generated from distributors and advertising service providers whose principal operations are located outside the United States or, in the case of the Digital Storefronts, the revenue generated from end-user purchases made outside of the United States) increased by \$4.7 million, from \$86.3 million in the year ended December 31, 2018 to \$91.0 million in the year ended December 31, 2019. This was primarily related to a \$4.1 million increase in our EMEA revenue, and a \$3.3 million increase in our revenue from Americas, excluding the United States, partially offset by a \$2.7 million decrease in our APAC revenue. These increases were primarily related to increased revenue from our growth games.

Cost of Revenue

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Cost of revenue:		
Platform commissions, royalties and other	\$ 140,655	\$ 128,445
Impairment of prepaid royalties and minimum guarantees	457	711
Amortization and impairment of intangible assets	4,387	9,119
Total cost of revenue	\$ 145,499	\$ 138,275
Revenue	\$ 411,381	\$ 366,561
Gross margin	64.6%	62.3%

Our cost of revenue increased by \$7.2 million, or 5.2%, from \$138.3 million in the year ended December 31, 2018 to \$145.5 million in the year ended December 31, 2019. This increase was primarily due to a \$12.8 million increase in platform commission fees due to a higher volume of revenue transactions through the Digital Storefronts and a \$511,000 increase in hosting costs. These increases were partially offset by a \$5.0 million decrease in amortization and impairment of intangible assets and prepaid royalties and a \$1.0 million decrease in expense related to warrants issued to certain celebrities.

The royalties we paid to licensors decreased by less than \$100,000, or 0.1%, from \$25.4 million in the year ended December 31, 2018 to \$25.3 million in the year ended December 31, 2019. This slight decrease was due to a larger percentage of our revenue being attributable to original intellectual property titles that are not royalty burdened, such as *Design Home* and *Covet Fashion*. We expect our cost of revenue to increase in 2020 primarily due to higher royalty payments and hosting fees.

Research and Development Expenses

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Research and development expenses	\$ 95,127	\$ 94,934
Percentage of revenue	23.1%	25.9%

Our research and development expenses increased \$193,000, or 0.2%, from \$94.9 million in the year ended December 31, 2018 to \$95.1 million in the year ended December 31, 2019. This was primarily attributable to a \$3.5 million increase in payroll related costs mainly due to increase in headcount, salary bonuses, and certain employee benefit costs and a \$3.3 million increase in allocated charges for equipment, facilities and depreciation. These increases were partially offset by a \$3.3 million decrease in outside services primarily related to lower external development costs, a \$2.3 million decrease in stock compensation expense mainly related to the decrease in vesting probability of certain performance-based equity awards, and a \$947,000 decrease in tax expense due to a tax credit related to one of the foreign jurisdictions in which we do business. As a percentage of revenue, research and development expenses decreased from 25.9% in the year ended December 31, 2018 to 23.1% in the year ended December 31, 2019. We expect our research and development expenditures to increase in absolute dollars in 2020 primarily due to an increase in headcount.

Sales and Marketing Expenses

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Sales and marketing expenses	\$ 140,298	\$ 113,860
Percentage of revenue	34.1%	31.1%

Our sales and marketing expenses increased \$26.4 million, or 23.2%, from \$113.9 million in the year ended December 31, 2018 to \$140.3 million in the year ended December 31, 2019. This was primarily attributable to an increase of \$22.9 million in user acquisition and other marketing expenditures primarily related to a significant investment in user acquisition for our three growth games and *Diner DASH Adventures* following its global launch in June 2019, partially offset by a decrease in user acquisition expenditures on our catalog titles, a \$1.7 million increase in professional costs due to increased use of consultants for customer care activities, a \$1.4 million increase in payroll related costs mainly due to the increase in headcount and related employee benefit costs, and a \$768,000 increase in allocated charges for equipment, facilities and depreciation. These increases were partially offset by a decrease in stock compensation expense of \$1.1 million mainly related to the decrease in vesting probability of certain performance-based equity awards. As a percentage of revenue, sales and marketing expenses increased from 31.1% in the year ended December 31, 2018 to 34.1% in the year ended December 31, 2019. We expect our sales and marketing expenses to increase in absolute dollars in 2020 primarily due to higher user acquisition expenditures related to expected launch of new titles such as *Disney Sorcerer's Arena*, *MLB Tap Sports Baseball 2020* and the next iteration of *Deer Hunter* during 2020.

General and Administrative Expenses

	Year Ended December 31,	
	2019	2018
	(In thousands)	
General and administrative expenses	\$ 23,216	\$ 31,667
Percentage of revenue	5.6%	8.6%

Our general and administrative expenses decreased \$8.5 million, or 26.7%, from \$31.7 million in the year ended December 31, 2018 to \$23.2 million in the year ended December 31, 2019. This was primarily attributable to a \$3.8 million decrease in stock-based compensation expense mainly related to the decrease in vesting probability of certain performance-based equity awards, a \$2.7 million decrease in professional fees mainly due to lower accounting and consulting costs, a \$2.6 million decrease in allocated charges for equipment, facilities and depreciation, a \$741,000 decrease in indirect tax related expenses, and a \$710,000 decrease in legal expenses due to the settlement of the lawsuit filed against us related to our acquisition of Crowdstar. These decreases were partially offset by an increase of \$1.4 million in payroll related costs and a \$544,000 increase in other operating expenses. As a percentage of revenue, general and administrative expenses decreased from 8.6% in the year ended December 31, 2018 to 5.6% in the year ended December 31, 2019. We expect our general and administrative expenses to increase slightly in absolute dollars in 2020 as compared to 2019 primarily due to increase in headcount.

Restructuring Charges

During the year ended December 31, 2019, no restructuring charges were recorded. During the year ended December 31, 2018, we recorded \$240,000 of restructuring charges related to employee termination and lease termination costs for our Long Beach, California office.

Interest and Other Income/(Expense), Net

Interest and other income/(expense), net, changed from a net expense of \$235,000 in the year ended December 31, 2018 to a net income of \$2.1 million in the year ended December 31, 2019. Interest and other income, net during the year ended December 31, 2019 was primarily attributable to \$2.3 million in interest income on money market funds and other investments, partially offset by \$159,000 in foreign translation losses. In the year ended December 31, 2018, interest and other expense, net was attributable to \$581,000 of currency losses for the revaluation of certain account balances, \$160,000 related to certain transition expenses, offset by \$505,000 of interest income from our money market investment accounts.

Income Tax Provision

Our income tax expense decreased from \$549,000 in 2018 to \$471,000 in 2019. The income tax expense in 2019 was mainly attributable to changes in pre-tax income in the United States and certain foreign entities reduced by a benefit as a result of releasing the tax reserves in relation to closing a foreign subsidiary. The provision for income taxes differs from the amount computed by applying the statutory U.S. federal rate principally due to the effect of our non-U.S. operations, non-deductible stock-based compensation expense, and change in foreign withholding taxes.

Our effective income tax rates for future periods will depend on a variety of factors, including changes in the deferred tax valuation allowance, as well as changes in our business such as intercompany transactions, any acquisitions, any changes in our international structure, any changes in the geographic location of our business functions or assets, changes in the geographic mix of our income, any changes in or termination of our agreements with tax authorities, changes in applicable accounting rules, applicable tax laws and regulations, rulings and interpretations thereof, developments in tax audit and other matters, and variations in our annual pre-tax income or loss. We incur certain tax expenses that do not decline proportionately with declines in our pre-tax consolidated income or loss. As a result, in absolute dollar terms, our tax expense will have a greater influence on our effective tax rate at lower levels of pre-tax income or loss than at higher levels. In addition, at lower levels of pre-tax income or loss, our effective tax rate will be more volatile.

Liquidity and Capital Resources

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Consolidated Statement of Cash Flows Data:		
Cash flows generated from operating activities	35,181	32,286
Cash flows used in investing activities	(5,438)	(636)
Cash flows (used in) / generated from financing activities	(443)	2,181

Since our inception, we have generally incurred recurring losses and negative annual cash flows from operating activities. We recorded a net income of \$8.9 million in the year ended December 31, 2019. As of December 31, 2019, we had an accumulated deficit of \$431.6 million.

Operating Activities

In 2019, net cash generated from operating activities was \$35.2 million, which was primarily due to an increase in deferred revenue of \$11.9 million mainly attributable to an increase in revenue from titles with longer useful lives, net income of \$8.9 million, an increase in accounts payable and accrued liabilities of \$3.1 million mainly due to the timing of payments to our vendors, and other assets and adjustments for non-cash items including stock based compensation expense of \$17.4 million, amortization and impairment of intangible assets of \$4.4 million, depreciation of \$4.2 million and non-cash lease expense of \$3.3 million. These changes were partially offset by a \$6.6 million decrease in accrued compensation due to lower variable compensation expense, a \$3.4 million increase in deferred platform commission fees attributable to higher bookings, a decrease of \$3.0 million in lease liability, a \$2.0 million increase in accounts receivable due to the timing of payments from our customers, and a \$2.0 million increase in other prepaid expenses.

In 2018, net cash generated from operating activities was \$32.3 million, which was primarily due to an increase in deferred revenue of \$17.9 million mainly attributable to an increase in revenue from titles with longer useful lives, a \$7.0 million decrease in accounts receivable due to the timing of payments from our customers, a \$1.3 million decrease in other prepaid expenses, and adjustments for non-cash items including stock based compensation expense of \$24.6 million, amortization and impairment of intangible assets of \$9.1 million, depreciation of \$3.9 million and warrant expense of \$1.0 million. These changes were partially offset by \$13.2 million of net loss, a \$10.2 million decrease in accounts payable and other accrued liabilities mainly due to the timing of payments to our vendors, a \$5.4 million increase in deferred platform commission fees attributable to higher bookings, a \$2.7 million decrease in accrued compensation, a \$1.8 million increase in prepaid and deferred royalties and a \$947,000 decrease in accrued royalties.

Investing Activities

Our primary investing activities have consisted of acquisition/divestiture of mobile gaming companies and purchases of property and equipment and leasehold improvements for our offices.

In 2019, we used \$5.4 million of cash for investing activities primarily related to property and equipment purchases.

In 2018, we used a net cash of \$636,000 for investing activities primarily related to property and equipment purchases of \$3.4 million partially offset by proceeds of \$2.7 million from the divestiture of our Moscow studio.

Financing Activities

In 2019, net cash used from financing activities was \$443,000 which was primarily due to \$8.4 million of taxes paid related to net share settlement of RSUs. These cash outflows were partially offset by \$8.0 million in proceeds received from option exercises and purchases under our employee stock purchase plan.

In 2018, net cash generated from financing activities was \$2.2 million which was primarily due to \$9.3 million in proceeds received from option exercises and purchases under our employee stock purchase plan. These cash inflows were partially offset by \$7.1 million of taxes paid related to net share settlement of RSUs.

Sufficiency of Current Cash and Cash Equivalents

Our cash and cash equivalents were \$127.1 million as of December 31, 2019. Cash and cash equivalents held outside of the U.S. in various foreign subsidiaries were \$2.5 million as of December 31, 2019, most of which were held by our Canadian and Indian subsidiaries. Under current tax laws and regulations, if cash and cash equivalents held outside the U.S. are distributed to the U.S. in the form of dividends or otherwise, we may be subject to additional U.S. income taxes and foreign withholding taxes. We have not provided deferred taxes on unremitted earnings attributable to foreign subsidiaries, because their earnings are intended to be reinvested indefinitely. However, if any such balances were to be repatriated, additional U.S. federal income tax payments could result. Computation of the potential deferred tax liabilities associated with unremitted earnings deemed to be indefinitely reinvested is not practicable.

We expect to fund our operations, grow our business and satisfy our contractual obligations during the next 12 months primarily through our cash and cash equivalents and cash generated by our operations. We believe our cash and cash equivalents and cash generated by our operations will be sufficient to meet our anticipated cash needs for at least the next 12 months from the date of this report; however, our cash requirements for the next 12 months may be greater than we anticipate due to, among other reasons, revenue that is lower than we currently anticipate, greater than expected operating expenses, particularly with respect to our research and development and sales and marketing initiatives, use of cash to pay minimum guaranteed royalties, use of cash to fund our foreign operations and the impact of foreign currency rate changes, unanticipated limitations or timing restrictions on our ability to access funds that are held in our non-U.S. subsidiaries or any investments or acquisitions that we may decide to pursue. We expect to continue to use cash to fund minimum guaranteed royalty payments during 2020 as milestone payments become due on games we publish and/or develop that incorporate licensed property, as well as to fund the purchase price of any acquisitions. If the games we develop based on such licensing arrangements fail to perform in accordance with our expectations, we may not fully recoup these minimum guaranteed royalty payments.

If our cash sources are insufficient to satisfy our cash requirements, we may seek to raise additional capital. However, we may be unable to do so on terms that are favorable to us or at all.

Contractual Obligations

The following table is a summary of our contractual obligations as of December 31, 2019:

	Payments Due by Period from December 31, 2019				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(In thousands)				
Operating lease obligations (1), (2)	\$ 53,057	\$ 4,500	\$ 13,926	\$ 14,138	\$ 20,493
Guaranteed royalties (3)	40,150	11,540	22,460	6,150	—
Total contractual obligations	<u>\$ 93,207</u>	<u>\$ 16,040</u>	<u>\$ 36,386</u>	<u>\$ 20,288</u>	<u>\$ 20,493</u>

- (1) We have entered into a sub-lease agreement for one of our U.S. offices. The future obligation amounts are net of the sub-lease payments.
- (2) The amount of tenant improvement allowance expected to be received in the first quarter of 2020 for one of our office leases is netted off against the future obligations amount.
- (3) We have entered into license and publishing agreements with various celebrities and other owners of brands, properties and other content to develop and publish games and other software applications for mobile devices. These agreements typically require us to make non-refundable, but recoupable payments of minimum guaranteed royalties or license fees as up-front payments or over the term of the agreement.

Off-Balance Sheet Arrangements

At December 31, 2019, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K, that are not already disclosed in this report.

Inflation

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we might not be able to fully offset these higher costs through price increases. Our inability or failure to do so could harm our business, operating results and financial condition.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2016-02, *Leases*. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements* and ASU 2018-10, *Codification Improvements to Topic 842, Leases*. ASU 2016-02 and the subsequent modifications are identified as “ASC 842”. ASC 842 requires lessees to recognize most leases as assets and liabilities on the balance sheet. We adopted ASC 842 and its related amendments effective on January 1, 2019 using the modified retrospective transition approach. See Note 9 “Leases” for the required disclosures related to the impact of adopting this standard and a discussion of our updated policies related to leases.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805)*, which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on our consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The standard provides financial statement preparers with an option to reclassify stranded tax effects within Accumulated Other Comprehensive Loss to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (or portion thereof) is recorded. The guidance is effective for us beginning in fiscal 2019, including interim periods within that fiscal year. We adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on our consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The guidance simplifies the accounting for share-based payments made to non-employees so the accounting for such payments is substantially the same as those made to employees. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on our consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, *Codification Improvements*. This amendment makes changes to a variety of topics to clarify, correct errors in, or make minor improvements to the Accounting Standards Codification (“ASC”). The transition and effective date guidance is based on the facts and circumstances of each amendment. Some of the amendments do not require transition guidance and are effective upon issuance of the guidance. However, many of the amendments do have transition guidance with effective dates for annual periods beginning after December 15, 2018. We adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on our consolidated financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. This new accounting standard update simplifies the measurement of goodwill by eliminating the Step 2 impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit’s goodwill with the carrying amount of that goodwill. The new guidance requires an entity to compare the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. The new guidance becomes effective for goodwill impairment tests in fiscal years beginning after December 15, 2019, though early adoption is permitted. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*. This guidance adds, modifies and removes several disclosure requirements relative to the three levels of inputs used to measure fair value in accordance with Topic 820, Fair Value Measurement. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This guidance clarifies the accounting treatment for implementation costs for cloud computing arrangements (hosting arrangements) that are service contracts. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12 - *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. The new guidance removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. It also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. This guidance is effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the impact of the new guidance on our consolidated financial statements.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

Interest Rate and Credit Risk

Our exposure to interest rate risk relates primarily to our investment portfolio and the potential losses arising from changes in interest rates.

We are potentially exposed to the impact of changes in interest rates as they affect interest earned on our investment portfolio. As of December 31, 2019, \$127.1 million of our cash and cash equivalents was held in operating bank accounts and money market funds earning nominal interest. Accordingly, we do not believe that a 10% change in interest rates would have a significant impact on our interest income, operating results or liquidity related to these amounts.

The primary objectives of our investment activities are, in order of importance, to preserve principal, provide liquidity and maximize income without significantly increasing risk. We do not currently use or plan to use derivative financial instruments in our investment portfolio.

As of December 31, 2019, our cash and cash equivalents were primarily maintained by financial institutions in the United States, Canada, India and Hong Kong, and our current deposits are likely in excess of insurance limits.

Our accounts receivable primarily relate to revenue earned from Digital Storefront operators and advertising platforms. We perform ongoing credit evaluations of our customers' and the Digital Storefronts' financial condition but generally require no collateral from them. At December 31, 2019, Apple Inc., or Apple, accounted for 47.2%, Google Inc., or Google, accounted for 28.5% and Tapjoy Inc., or Tapjoy accounted for 17.8% of total accounts receivable. At December 31, 2018, Apple accounted for 40.8%, Google accounted for 30.3% and Tapjoy accounted for 21.1% of total accounts receivable. No other customer or Digital Storefront represented more than 10% of our total accounts receivable as of these dates.

Foreign Currency Exchange Risk

We transact business in more than 100 countries in more than 30 different currencies, and in 2019 and 2018, some of these currencies fluctuated significantly. Our operations outside of the United States are maintained in their local currency, with the significant operating currencies consisting of the Indian Rupee and Canadian Dollar. Although recording operating expenses in the local currency of our foreign operations mitigates some of the exposure of foreign currency fluctuations, variances among the currencies of our customers and our foreign operations relative to the United States Dollar, or USD, could have and have had a material impact on our results of operations.

Our foreign currency exchange gains and losses have been generated primarily from fluctuations the Indian Rupee versus the USD and the Canadian Dollar versus the USD. At month-end, non-functional currency-denominated accounts receivable and intercompany balances are marked to market and unrealized gains and losses are included in interest and other income/(expense), net. Translation adjustments arising from the use of differing exchange rates are included in accumulated other comprehensive income/(loss) in stockholders' equity. We have in the past experienced, and in the future expect to experience, foreign currency exchange gains and losses on our accounts receivable and intercompany receivables and payables. Foreign currency exchange gains and losses could have a material adverse effect on our business, operating results and financial condition.

To date, we have not engaged in exchange rate hedging activities, and we do not expect to do so in the foreseeable future.

Item 8. *Financial Statements and Supplementary Data*

**GLU MOBILE INC.
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Glu Mobile Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Glu Mobile Inc. and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of operations, of comprehensive income/(loss), of stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2019, 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and the manner in which it accounts for revenue in 2018.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated 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.

Estimation of the Average Playing Period of Paying Users Associated with Durable Virtual Items

As described in Notes 1 and 5 to the consolidated financial statements, the Company generates revenue through in-application purchases within its games. The Company sells both consumable and durable virtual items. The Company's revenue from consumable virtual items has been insignificant. Durable virtual items are items that are accessible to the player over an extended period of time and that remain in the game for as long as the player continues to play. Revenue from durable virtual items amounted to \$361 million for the year ended December 31, 2019. The Company's performance obligations represent a single combined performance obligation, which is to make the game and the ongoing game-related services available to the players. The Company recognizes revenue from durable virtual items over the estimated average playing period of paying users on a per title basis. Management uses the "survival analysis" model to estimate the average playing period for paying users, which statistically estimates the average playing period of each title by analyzing the historical behavior patterns of paying users. This model requires stratification of user data into active and inactive paying users on a per title basis, in which management considers that active users are those who are active in the game for the past 30 days as of the evaluation date, and the remaining users are considered inactive.

The principal considerations for our determination that performing procedures relating to the estimation of the average playing period of paying users associated with durable virtual items is a critical audit matter are (i) there was significant judgment by management in the application of the "survival analysis" model; (ii) there was a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's estimate, including the significant assumption used to determine active and inactive paying users; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing procedures and evaluating audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included (i) testing the

effectiveness of controls relating to the estimation of the average playing period of paying users associated with durable virtual items, including controls over the development of the significant assumption used to determine active and inactive paying users in the “survival analysis” model; (ii) testing management’s process for estimating the average playing period of paying users associated with durable virtual items, including testing management’s method of obtaining and analyzing the data, the significant assumption relating to the stratification of user data into active and inactive paying users, and the completeness and accuracy of the user data; and (iii) using professionals with specialized skill and knowledge to assist in evaluating the appropriateness of the model, the reasonableness of the significant assumption relating to the stratification of user data into active and inactive paying users on a per title basis.

/s/ PricewaterhouseCoopers LLP
San Francisco, California
February 28, 2020

We have served as the Company’s auditor since 2003, which includes periods before the Company became subject to SEC reporting requirements.

GLU MOBILE INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	<u>December 31,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 127,053	\$ 97,834
Accounts receivable, net	29,304	27,325
Prepaid royalties	15,347	8,520
Deferred royalties	5,067	4,410
Deferred platform commission fees	29,239	25,862
Restricted cash	—	110
Prepaid expenses and other assets	8,629	6,940
Total current assets	214,639	171,001
Property and equipment, net	17,643	13,888
Operating lease right of use assets	35,170	—
Long-term prepaid royalties	26,879	1,667
Other long-term assets	2,733	2,505
Intangible assets, net	4,758	9,145
Goodwill	116,227	116,227
Total assets	<u>\$ 418,049</u>	<u>\$ 314,433</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 16,892	\$ 10,480
Accrued liabilities	643	1,384
Accrued compensation	11,260	17,896
Accrued royalties	20,802	14,139
Accrued restructuring	—	294
Short-term operating lease liabilities	3,528	—
Deferred revenue	97,629	85,736
Total current liabilities	150,754	129,929
Long-term accrued royalties	26,842	1,649
Long-term operating lease liabilities	37,351	—
Other long-term liabilities	15	5,542
Total liabilities	214,962	137,120
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, \$0.0001 par value; 5,000 shares authorized at December 31, 2019 and December 31, 2018; no shares issued and outstanding at December 31, 2019 and December 31, 2018	—	—
Common stock, \$0.0001 par value; 250,000 shares authorized at December 31, 2019 and December 31, 2018; 147,778 and 143,870 shares issued and outstanding at December 31, 2019 and December 31, 2018	15	14
Additional paid-in capital	634,721	617,781
Accumulated other comprehensive (loss)/income	(37)	1
Accumulated deficit	(431,612)	(440,483)
Total stockholders' equity	203,087	177,313
Total liabilities and stockholders' equity	<u>\$ 418,049</u>	<u>\$ 314,433</u>

The accompanying notes are an integral part of these consolidated financial statements.

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

	Year Ended December 31,		
	2019	2018	2017
Revenue	\$ 411,381	\$ 366,561	\$ 286,827
Cost of revenue:			
Platform commissions, royalties and other	140,655	128,445	103,499
Impairment of prepaid royalties and minimum guarantees	457	711	27,323
Impairment and amortization of intangible assets	4,387	9,119	10,331
Total cost of revenue	145,499	138,275	141,153
Gross profit	265,882	228,286	145,674
Operating expenses:			
Research and development	95,127	94,934	92,420
Sales and marketing	140,298	113,860	104,356
General and administrative	23,216	31,667	34,425
Restructuring charge	—	240	6,019
Total operating expenses	258,641	240,701	237,220
Income/(loss) from operations	7,241	(12,415)	(91,546)
Interest and other income/(expense), net	2,101	(235)	(6,850)
Income/(loss) before income taxes	9,342	(12,650)	(98,396)
Income tax (provision)/benefit	(471)	(549)	826
Net income/(loss)	\$ 8,871	\$ (13,199)	\$ (97,570)
Net income/(loss) per common share - basic	\$ 0.06	\$ (0.09)	\$ (0.72)
Net income/(loss) per common share - diluted	\$ 0.06	\$ (0.09)	\$ (0.72)
Weighted average common shares outstanding:			
Basic	145,838	141,402	135,715
Diluted	157,383	141,402	135,715

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME/(LOSS)
(in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net income/(loss)	\$ 8,871	\$ (13,199)	\$ (97,570)
Other comprehensive income/(loss):			
Foreign currency translation adjustments	(38)	7	(252)(1)
Other comprehensive income/(loss)	(38)	7	(252)
Comprehensive income/(loss)	<u>\$ 8,833</u>	<u>\$ (13,192)</u>	<u>\$ (97,822)</u>

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- (1) Includes release of cumulative translation adjustment upon substantial liquidation / winding down of the Company's foreign subsidiaries which is recognized in interest and other expense, net in the Company's consolidated statement of operations for the year ended December 31, 2017.

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE 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				
Balances at December 31, 2016	<u>134,001</u>	<u>\$ 13</u>	<u>\$ 571,243</u>	<u>\$ 246</u>	<u>\$ (338,688)</u>	<u>\$ 232,814</u>
Net loss	—	—	—	—	(97,570)	(97,570)
Stock-based compensation expense	—	—	14,845	—	—	14,845
Issuance of common stock upon exercise of stock options	1,083	—	2,564	—	—	2,564
Issuance of common stock upon exercise of warrants	1,000	—	3,000	—	—	3,000
Taxes paid related to net share settlement of equity awards	1,767	1	(3,369)	—	—	(3,368)
Issuance of common stock pursuant to Employee Stock Purchase Plan	894	—	1,567	—	—	1,567
Non-cash warrant expense	—	—	260	—	—	260
Cumulative effect adjustment from adoption of ASU 2016-09	—	—	(148)	—	148	—
Other comprehensive loss	—	—	—	(252)	—	(252)
Balances at December 31, 2017	<u>138,745</u>	<u>\$ 14</u>	<u>\$ 589,962</u>	<u>\$ (6)</u>	<u>\$ (436,110)</u>	<u>\$ 153,860</u>
Net loss	—	—	—	—	(13,199)	(13,199)
Stock-based compensation expense	—	—	24,592	—	—	24,592
Issuance of common stock upon exercise of stock options	2,721	—	6,922	—	—	6,922
Taxes paid related to net share settlement of equity awards	1,634	—	(7,097)	—	—	(7,097)
Issuance of common stock pursuant to Employee Stock Purchase Plan	770	—	2,356	—	—	2,356
Non-cash warrant expense	—	—	1,046	—	—	1,046
Cumulative effect adjustment from adoption of ASU 2014-09	—	—	—	—	8,826	8,826
Other comprehensive income	—	—	—	7	—	7
Balances at December 31, 2018	<u>143,870</u>	<u>\$ 14</u>	<u>\$ 617,781</u>	<u>\$ 1</u>	<u>\$ (440,483)</u>	<u>\$ 177,313</u>
Net income	—	—	—	—	8,871	8,871
Stock-based compensation expense	—	—	17,383	—	—	17,383
Issuance of common stock upon exercise of stock options	1,723	1	4,553	—	—	4,554
Taxes paid related to net share settlement of equity awards	1,457	—	(8,408)	—	—	(8,408)
Issuance of common stock pursuant to Employee Stock Purchase Plan	728	—	3,412	—	—	3,412
Other comprehensive loss	—	—	—	(38)	—	(38)
Balances at December 31, 2019	<u>147,778</u>	<u>\$ 15</u>	<u>\$ 634,721</u>	<u>\$ (37)</u>	<u>\$ (431,612)</u>	<u>\$ 203,087</u>

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income/(loss)	\$ 8,871	\$ (13,199)	\$ (97,570)
Adjustments to reconcile net income/(loss) to net cash generated/(used in) operating activities:			
Depreciation	4,225	3,855	3,195
Impairment and amortization of intangible assets	4,387	9,119	10,331
Stock-based compensation	17,383	24,592	15,063
Warrant expense	—	1,046	631
Net loss from the sale of a foreign subsidiary	—	—	6,468
Other non-cash adjustments	156	1,095	(1,577)
Impairment of prepaid royalties and minimum guarantees	457	711	27,323
Non-cash lease expense	3,348	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(1,975)	7,028	(13,061)
Prepaid royalties	389	(947)	(18,868)
Deferred royalties	(657)	(835)	(1,088)
Deferred platform commission fees	(3,377)	(5,416)	(8,876)
Prepaid expenses and other assets	(1,957)	1,345	(4,151)
Accounts payable, accrued restructuring, and other accrued liabilities	3,090	(10,709)	5,223
Accrued compensation	(6,636)	(2,707)	8,094
Accrued royalties	(1,029)	(947)	4,125
Deferred revenue	11,893	17,947	32,539
Other long-term liabilities	(365)	308	3,963
Operating lease liabilities	(3,022)	—	—
Net cash generated from/(used in) operating activities	35,181	32,286	(28,236)
Cash flows from investing activities:			
Purchase of property and equipment	(5,283)	(3,362)	(11,344)
Proceeds from divestiture of Moscow studio	—	2,726	—
Net cash paid for acquisitions	—	—	(1,659)
Other investing activities	(155)	—	(1,410)
Net cash used in investing activities	(5,438)	(636)	(14,413)
Cash flows from financing activities:			
Proceeds from exercise of stock options and purchases under the ESPP	7,965	9,278	4,131
Taxes paid related to net share settlement of equity awards	(8,408)	(7,097)	(3,368)
Proceeds from exercise of stock warrants and issuance of common stock	—	—	3,000
Net cash (used in)/generated from financing activities	(443)	2,181	3,763
Effect of exchange rate changes on cash	(191)	(253)	(162)
Net increase/(decrease) in cash, cash equivalents and restricted cash	29,109	33,578	(39,048)
Cash, cash equivalents and restricted cash at beginning of period	97,944	64,366	103,414
Cash, cash equivalents and restricted cash at end of period	\$ 127,053	\$ 97,944	\$ 64,366
Supplemental disclosures of cash flow information			
Purchases of property and equipment included in accounts payable and accrued liabilities and other current liabilities	\$ 3,633	\$ 1,101	\$ 1,350
Income taxes paid	\$ 723	\$ 382	\$ 365

The accompanying notes are an integral part of these consolidated financial statements.

GLU MOBILE INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollar and share amounts in thousands, except per share data)

NOTE 1 — THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Company

Glu Mobile Inc. (the “Company” or “Glu”) was incorporated in Nevada in May 2001 and reincorporated in the state of Delaware in March 2007. The Company develops, publishes, and markets a portfolio of games designed for users of smartphones and tablet devices who download and make purchases within its games through direct-to-consumer digital storefronts, such as the Apple App Store, Google Play Store, and others (“Digital Storefronts”). The Company creates games based on its own original brands, as well as third-party licensed brands, properties and other content.

Basis of Presentation

The Company’s consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”).

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated on consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires the Company’s management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and accompanying notes. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Estimates and assumptions reflected in the financial statements include, but are not limited to, estimation of the average playing period of paying users associated with durable virtual items, the allowance for doubtful accounts, useful lives of property and equipment and intangible assets, valuation and realizability of deferred tax assets and uncertain tax positions, fair value of stock awards issued, fair value of warrants issued, accounting for business combinations, evaluating goodwill, long-lived assets for impairment, and realization of prepaid royalties and fair value of investments. Actual results may differ from these estimates and these differences may be material.

Revenue Recognition

The Company generates revenue through in-application purchases (“in-app purchases”) within its games on smartphones and tablet devices, such as Apple’s iPhone and iPad, and mobile devices utilizing Google’s Android operating system. Users can download the Company’s free-to-play games through Digital Storefronts. The Company also has relationships with certain advertising service providers for advertisements within smartphone games and revenue from these advertising providers is generated through impressions, clickthroughs, banner ads, and offers.

The Company adopted Accounting Standard Codification Topic 606, *Revenue with Contracts with Customers* (“ASC 606”) and its related amendments effective January 1, 2018 using a modified retrospective method. The reported results for the year ended December 31, 2018 reflect the application of ASC 606 guidance while the reported results for the year ended December 31, 2017 were prepared under the guidance of Accounting Standard Codification 605 (“ASC 605”), *Revenue Recognition* (ASC 605), which is also referred to herein as “legacy GAAP” or the “previous guidance”. The adoption of ASC 606 represents a change in accounting principle that will more closely align revenue recognition with the delivery of the Company’s services and will provide financial statement readers with enhanced disclosures.

In accordance with ASC 606, revenue is recognized when or as a customer obtains control of promised services. The amount of revenue recognized reflects the consideration which the Company expects to receive in exchange for these services. A contract with a customer exists when (i) the Company enters into an enforceable contract with a customer that defines each party's rights regarding the services to be transferred and identifies the payment terms related to these services, (ii) the contract has commercial substance and, (iii) the Company determines that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. The Company applies judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

ASC 606 requires an entity to disclose the revenue recognized in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods (for example, due to changes in transaction price). Revenue recognized relating to performance obligations satisfied in prior periods was \$0 for the year ended December 31, 2019 and December 31, 2018, respectively.

The Company elects to use the practical expedient under 606-10-50-14 which states an entity need not disclose the information in paragraph 606-10-50-13 for a performance obligation if the following criteria are met:

1. the performance obligation is part of a contract that has an original expected duration of one year or less; and
2. the entity recognizes revenue from the satisfaction of the performance obligation in accordance with paragraph 606-10-55-18 (right to invoice).

Since all of the Company's contracts have an original expected duration of one year or less, the Company elects to use this practical expedient and does not disclose the aggregate transaction price allocated to unsatisfied or partially satisfied performance obligations.

In-App Purchases

Users can download the Company's free-to-play games within the Digital Storefronts and pay to acquire virtual currency, which can be redeemed in the game for virtual goods, or virtual goods directly (together, defined as "virtual items") to enhance their game-playing experience. The Company sells both consumable and durable virtual items and receives reports from the Digital Storefronts, which breakdown the various purchases made from the Company's games over a given time period. The Company reviews these reports and determines on a per-item basis whether the purchase was a consumable virtual item or a durable virtual item. Consumable virtual items are items that are consumed at a predetermined time or otherwise have limitations on repeated use. Durable virtual items are items, such as furniture, clothes, etc. that are accessible to the player over an extended period of time and that remain in the game for as long as the player continues to play.

The initial download of the mobile game from the Digital Storefront does not create a contract under ASC 606 because of the lack of commercial substance; however, the separate election by the player to make an in-application purchase satisfies the criterion thus creating a contract under ASC 606. The Company has identified the following performance obligations in these contracts:

1. Ongoing game related services such as hosting of game play, storage of customer content, when and if available content updates, maintaining the virtual currency management engine, tracking gameplay statistics, matchmaking as it relates to multiple player gameplay, etc.
2. Obligation to the paying player to continue displaying and providing access to the virtual items within the game.

Neither of these obligations are considered distinct since the actual mobile game and the related ongoing services are both required to purchase and benefit from the related virtual items. As such, the Company's performance obligations represent a single combined performance obligation which is to make the game and the ongoing game related services available to the players. The transaction price, which is the amount paid for the virtual items by the player, is allocated entirely to the single combined performance obligation. The Company recognizes revenue for durable virtual items over the estimated average playing period of paying users on a per title basis. The Company's revenue from consumable virtual items has been insignificant over the previous three years. The Company has estimated the useful life of a paying user between four and eight months.

Advertisements and Offers

The Company has relationships with certain advertising service providers for advertisements within its mobile games. Revenue from these advertising service providers is generated through impressions, clickthroughs, offers and banner ads. Offers are the type of advertisements where the players are rewarded with virtual currency for completing specified actions, such as downloading another application, watching a short video, subscribing to a service or completing a survey. The Company has determined the advertising buyer to be its customer and displaying the advertisements within the mobile games is identified as the single performance obligation. Revenue from advertisements and offers are recognized at the point-in-time the advertisements are displayed in the game or the offer has been completed by the user as the customer simultaneously receives and consumes the benefits provided from these services.

Other Estimates and Judgments

The Company computes its estimated average playing period of paying users at least twice each year. It has examined the playing patterns of paying users across a representative sample of its games across various genres.

The Company uses the "survival analysis" model to estimate the average playing period for paying users. This model provides for a singular approach to estimating the average playing period of paying users on a title by title basis for the Company's diverse portfolio of games. It is a statistical model that analyzes time duration until one or more events happens and is commonly used in various industries for estimating lifespans. The Company believes this is an appropriate model to estimate the average playing period of paying users for its titles as this model statistically estimates the average playing period of each title by analyzing the historical behavior patterns of paying users.

This model requires the stratification of user data into active and inactive paying users on a per title basis. Active users are those who are active in the game for the past 30 days as of the evaluation date. The remaining users are considered inactive and deemed to have churned from the game. These users are treated mathematically differently in the model than those who are still active. A distribution curve is then fit to the user data to estimate the average playing period of paying users on a per title basis.

The Company has selected a threshold of 120 days from the commercial launch of a title as the minimum number of days of data required for this model. This threshold was deemed to be appropriate as the Company tested the model using lower thresholds which resulted in inconsistencies in the estimate of the average playing period of paying users. For new titles with less than 120 days of data that share similar attributes with an existing title and/or prequel titles, the average playing period is determined based on the average playing period of that existing title or prequel title, as applicable. For all other titles with less than 120 days of data, the average playing period is determined based on the average playing period of all other remaining existing titles.

While the Company believes its estimates to be reasonable based on available game player information, it may revise such estimates in the future if a titles' user characteristics change. Any adjustments arising from changes in the estimates of the average playing period for paying users would be applied to the current quarter and prospectively on the basis that such changes are caused by new information that indicates a change in user behavior patterns compared to historical titles. Any changes in the Company's estimates of the useful life of virtual items in a certain title may result in revenue being recognized on a basis different from prior periods' and may cause its operating results to fluctuate.

Principal Agent Considerations

The Company evaluated its Digital Storefront and advertising service provider agreements under ASC 606 in order to determine if it is acting as the principal or as an agent when selling virtual items or advertisements within its games. The Company primarily uses Digital Storefronts for distributing its smartphone games and for enabling players to purchase virtual items and advertising service providers to serve advertisements within its games. The Company evaluated the following factors to assess whether it controls each specified good or service before that good or service is transferred to the customer:

- the party responsible for the fulfillment of the virtual items, game related services, or serving of advertisements;
- the party having the discretion to set pricing with the end-users; and
- the party having inventory risk before the specified good or service have been transferred to a customer.

Based on the evaluation of the above indicators, the Company determined that it has control of the services before they are transferred to the end-user. Thus, the Company is generally acting as a principal and is the primary obligor to end-users for games distributed through Digital Storefronts and advertisements served through its advertising service providers. Therefore, the Company recognizes revenue related to these arrangements on a gross basis, when the necessary information about the gross amounts or platform fees charged, before any adjustments, are made available by the Digital Storefronts and advertising service providers. In situations where the price paid by the end-user of the advertising service provider is not known, the Company accounts for these transactions on a net basis.

Deferred Platform Commissions and Royalties

Digital Storefronts retain platform commissions and fees on each purchase made by the paying players through the Digital Storefront. The Company is also obligated to pay ongoing licensing fees in the form of royalties related to the games developed based on or significantly incorporating licensed brands, properties or other content, and the Company plans to incorporate additional licensed content in some of its own originally branded games. As revenue from sales to paying players through Digital Storefronts are deferred, the related direct and incremental platform commissions and fees as well as third-party royalties are also deferred on the consolidated balance sheets. The deferred platform commissions and royalties are recognized in the consolidated statements of operations in “Cost of revenue” in the period in which the related sales are recognized as revenue.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand and money market funds. The Company considers all investments purchased with original maturities of three months or less from the date of purchase to be cash equivalents. The Company deposits cash and cash equivalents with financial institutions that management believes are of high credit quality. Deposits held with financial institutions often exceed the amount of insurance on these deposits.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash, cash equivalents and accounts receivable.

The Company derives its accounts receivable from revenue earned from customers located worldwide. The Company performs ongoing credit evaluations of its customers’ financial condition and, generally, requires no collateral from its customers. The Company bases its allowance for doubtful accounts on management’s best estimate of the amount of probable credit losses in the Company’s existing accounts receivable. The Company writes off accounts receivable balances against the allowance when it determines that the amount will not be recovered.

The following table summarizes the revenue from customers or aggregate purchases through Digital Storefronts in excess of 10% of the Company's revenue:

	Year Ended December 31,		
	2019	2018	2017
Apple	54.4 %	54.7 %	54.2 %
Google	33.5 %	31.3 %	30.3 %

At December 31, 2019, Apple Inc. ("Apple"), Google Inc. ("Google"), and Tapjoy Inc. ("Tapjoy") accounted for 47.2%, 28.5%, and 17.8%, respectively, of total accounts receivable. At December 31, 2018, Apple, Google and Tapjoy accounted for 40.8%, 30.3%, and 21.1%, respectively, of total accounts receivable. No other customer represented more than 10% of the Company's total accounts receivable as of these dates.

Fair Value

The Company accounts for fair value in accordance with Accounting Standard Codification 820, *Fair Value Measurements and Disclosures* ("ASC 820"). Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The Company uses a three-tier hierarchy, which prioritizes the inputs used in measuring fair value as follows:

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

Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Foreign Currencies

The functional currency of each of the Company's wholly owned subsidiaries is either the applicable local currency or the U.S. dollar. In preparing its consolidated financial statements, the Company translates the financial statements of its foreign subsidiaries from their functional currencies, the local currency, into U.S. Dollars. The translation of foreign currencies into U.S. dollars is performed for assets and liabilities using current foreign currency exchange rates in effect at the balance sheet date and for revenues and expense accounts using average foreign currency exchange rates during the period. Capital accounts are translated at historical foreign currency exchange rates. Translation gains and losses are included as a component of accumulated other comprehensive income/(loss) within stockholders' equity. However, if adjustments arise from foreign currency exchange rate changes on transactions denominated in a currency other than the functional currency, any gain or loss associated with the translation of these financial statements would be included in interest and other income/(expense), net within the Company's consolidated statements of operations. The foreign currency translation adjustments were not material for the year ended December 31, 2019.

Cumulative foreign currency translation adjustments include any gain or loss associated with the translation of a subsidiary's financial statements when the functional currency of a subsidiary is the local currency. If the Company disposes of any of its subsidiaries, any cumulative translation gains or losses would be realized and recorded in other income (expense) within the Company's consolidated statement of operations in the period during which the disposal occurs. If the Company determines that there has been a change in the functional currency of a subsidiary from a local currency to the U.S. Dollar, any translation gains or losses arising after the date of change would be included in interest and other income/(expense), net within the Company's consolidated statement of operations.

Prepaid or Guaranteed Licensor Royalties

The Company's royalty expenses consist of fees that it pays to content owners for the use of their brands, properties and other licensed content, including trademarks and copyrights, in the development of the Company's games. Royalty-based obligations are either paid in advance and capitalized on the balance sheet as prepaid royalties or accrued as incurred and subsequently paid. These royalty-based obligations are expensed to cost of revenue at the greater of the revenue derived from the relevant game multiplied by the applicable contractual rate or an effective royalty rate based on expected net product sales.

The Company's contracts with some licensors include minimum guaranteed royalty payments, which are payable regardless of the ultimate revenue generated from end users. In accordance with Accounting Standard Codification 440-10, *Commitments* ("ASC 440-10"), the Company recorded a minimum guaranteed royalty liability of \$40,150 and \$7,304 as of December 31, 2019 and 2018, respectively. The balance is included in accrued royalties and long-term accrued royalties on the Company's consolidated balance sheet. When no significant performance remains with the licensor, the Company initially records each of these guarantees as an asset and as a liability at the contractual amount. When significant performance remains with the licensor, the Company records royalty payments as an asset when actually paid and as a liability when incurred, rather than upon execution of the contract. The classification of minimum royalty payment obligations between long-term and short-term is determined based on the expected timing of recoupment of earned royalties calculated on projected revenue for the licensed IP games.

Each quarter, the Company evaluates the realization of its prepaid royalties as well as any recognized guarantees not yet paid to determine amounts that it deems unlikely to be realized through product sales. The Company uses estimates of revenue, cash flows and net margins to evaluate the future realization of prepaid royalties, license fees, and guarantees. This evaluation considers multiple factors such as the term of the agreement, forecasted demand, game life cycle status, game development plans, and current and anticipated sales levels, as well as other qualitative factors such as the success of similar games and similar genres on mobile devices published by the Company and its competitors and/or other game platforms (e.g., consoles and personal computers) utilizing the intellectual property. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, the Company records an impairment charge to cost of revenue in the period in which impairment is indicated. The Company recorded impairment charges to cost of revenue of \$457, \$711, and \$27,323 related to prepaid guaranteed royalties for certain of its celebrity license agreements, and certain other prepaid royalties during the years ended December 31, 2019, 2018, and 2017, respectively.

Goodwill and Intangible Assets

In accordance with Accounting Standard Codification 350, *Intangibles-Goodwill and Other* ("ASC 350"), the Company's goodwill is not amortized but is tested for impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. The Company performs its annual impairment test as of September 30th each year, at the reporting unit level, which is at the company level as a whole, since it operates in a single reporting segment. The impairment review involves a multiple-step process as follows:

Step — 0 The Company evaluates qualitative factors and overall financial performance to determine whether it is necessary to perform the first step of the two-step goodwill test. This step is referred to as "Step 0." Step 0 involves, among other qualitative factors, weighing the relative impact of factors that are specific to the reporting unit as well as industry and macroeconomic factors. After assessing those various factors, if it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the entity will need to proceed to the first step of the two-step goodwill impairment test.

Step — 1 The Company compares the fair value of each of its reporting units to the carrying value including goodwill of that unit. For each reporting unit where the carrying value, including goodwill, exceeds the unit's fair value, the Company moves on to step 2. If a unit's fair value exceeds the carrying value, no further work is performed and no impairment charge is necessary.

Step — 2 The Company performs an allocation of the fair value of the reporting unit to its identifiable tangible and intangible assets (other than goodwill) and liabilities. This allows the Company to derive an implied fair value for the unit's goodwill. The Company then compares the implied fair value of the reporting unit's goodwill with the carrying value of the unit's goodwill. If the carrying amount of the unit's goodwill is greater than the implied fair value of its goodwill, an impairment charge would be recognized for the excess.

In 2019, 2018, and 2017, the Company did not record any goodwill impairment charges as it was determined that it was more likely than not that the fair values of the reporting units exceeded their respective carrying values.

Purchased intangible assets with finite lives are amortized using the straight-line method over their useful lives ranging from three to seven years and are reviewed for impairment in accordance with Accounting Standard Codification 360, *Property, Plant and Equipment* ("ASC 360").

Impairment of Long-Lived Assets

The Company evaluates its long-lived assets, including property and equipment and intangible assets with finite lives, for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. Factors considered important that could result in an impairment review include significant underperformance relative to expected historical or projected future operating results, significant changes in the manner of use of acquired assets, significant negative industry or economic trends, and a significant decline in the Company's stock price for a sustained period of time. Impairment exists if the carrying amounts of such assets exceed the estimates of future undiscounted cash flows expected to be generated by such assets. Should an impairment exist, the impairment loss would be measured based on the excess carrying value of the asset over expected discounted future cash flows, or if applicable, the quoted market price from those assets. The Company has not recorded any such impairment charge during the years presented.

Property and Equipment

The Company states property and equipment at cost less accumulated depreciation and amortization. The Company computes depreciation or amortization using the straight-line method over the estimated useful lives of the respective assets or, in the case of leasehold improvements, the lease term of the respective assets, whichever is shorter. Cost of maintenance and repairs that do not improve or extend the lives of the respective assets are expensed as incurred.

The depreciation and amortization periods for the Company's property and equipment are as follows:

Computer equipment	Three years
Computer software	Two to Three years
Furniture and fixtures	Three years
Leasehold improvements	Shorter of the estimated useful life or remaining term of lease

Internal Use Software

The Company capitalizes internal use software development costs in accordance with Accounting Standard Codification 350-40, *Intangibles-Goodwill and Other-Internal Use Software* ("ASC 350-40") and Accounting Standards Update 2015-05, *Cloud Computing Arrangements* ("ASU 2015-05"). The Company capitalizes software development costs, including costs incurred to purchase third-party software, beginning when it determines certain factors are present including, among others, that technology exists to achieve the performance requirements and/or buy versus internal development decisions, which the Company equates to the application development stage. Capitalized costs are amortized using the straight-line method over the estimated useful life of the software once it is ready for its intended use. The Company believes the straight-line recognition method best approximates the manner in which the expected benefit will be derived. The Company capitalized certain internal use software costs totaling approximately \$1,216, \$65, and \$924 during the years ended December 31, 2019, 2018, and 2017, respectively. The estimated useful life of costs

capitalized is generally three years. During the years ended December 31, 2019, 2018 and 2017, the amortization of capitalized software costs totaled approximately \$809, \$896, and \$1,031, respectively. Capitalized internal use software development costs are included in property and equipment, net.

Research and Development Costs

The Company charges costs related to research, design and development of products to research and development expense as incurred. The types of costs included in research and development expenses include personnel-related expenses such as salaries and benefits related to product development employees, third party development cost, contractor fees, and allocated facilities costs.

Software Development Costs

The Company applies the principles of Accounting Standard Codification 985-20, *Software-Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed* (“ASC 985-20”). ASC 985-20 requires that software development costs incurred in conjunction with product development for software to be sold, leased or otherwise marketed be charged to research and development expense until technological feasibility is established. Thereafter, until the product is released for sale, software development costs must be capitalized and reported at the lower of unamortized cost or net realizable value of the related product. The Company has adopted the “tested working model” approach to establishing technological feasibility for its games. Under this approach, the Company does not consider a game in development to have passed the technological feasibility milestone until the Company has completed a model of the game that contains essentially all the functionality and features of the final game and has tested the model to ensure that it works as expected. To date, the Company has not incurred significant costs between the establishment of technological feasibility and the release of a game for sale; thus, the Company has expensed all software development costs as incurred.

Stock-Based Compensation

The Company applies the fair value provisions of Accounting Standard Codification 718, *Compensation-Stock Compensation* (“ASC 718”). ASC 718 requires the recognition of compensation expense, using a fair-value based method, for costs related to all stock-based payments including stock options, restricted stock units (“RSUs”), performance stock units (“PSUs”), performance stock options (“PSOs”), and employee stock purchase plan (“ESPP”). The number of PSUs and PSOs earned and eligible to vest is determined based on achievement of specified financial performance measures. The fair value of stock options and PSOs and stock purchase rights granted pursuant to the Company’s equity incentive plans and 2007 Employee Stock Purchase Plan, respectively, is determined using the Black-Scholes valuation model. The determination of fair value is affected by the stock price, as well as assumptions regarding subjective variables such as expected employee exercise behavior and expected stock price volatility over the expected term of the award. Generally, these assumptions are based on historical information and judgment is required to determine if historical trends may be indicators of future outcomes.

The cost of RSUs and PSUs is determined using the fair value of the Company’s common stock based on the quoted closing price of the Company’s common stock on the date of grant. Compensation cost for stock options, RSUs and performance-based awards with a single vesting date is amortized ratably over the requisite service period. For performance-based awards that have multiple vesting dates, the compensation cost is recognized ratably over the requisite service period for each tranche, whereby each vesting tranche is treated as a separate award for determining the requisite service period. The compensation cost for performance-based awards may be adjusted over the vesting period based on interim estimates of performance against the pre-set financial performance measures.

Advertising Expenses

The Company expenses the production costs of advertising, including direct response advertising, the first time the advertising takes place. Advertising expense was \$117,979, \$95,037, and \$88,775 in the years ended December 31, 2019, 2018, and 2017, respectively.

Income Taxes

The Company accounts for income taxes in accordance with Accounting Standard Codification 740, *Income Taxes* (“ASC 740”), which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in its financial statements or tax returns. Under ASC 740, the Company determines deferred tax assets and liabilities based on the temporary difference between the financial statement and tax bases of assets and liabilities using the enacted tax rates in effect for the year in which it expects the differences to reverse. The Company establishes valuation allowances when necessary to reduce deferred tax assets to the amount it expects to realize.

The Company accounts for uncertain tax positions in accordance with ASC 740, which requires companies to adjust their financial statements to reflect only those tax positions that are more-likely-than-not to be sustained. ASC 740 prescribes a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns. The Company’s policy is to recognize interest and penalties related to unrecognized tax benefits in income tax expense.

Restructuring

The Company accounts for costs associated with employee terminations and other exit activities in accordance with Accounting Standard Codification 420, *Exit or Disposal Cost Obligations* (“ASC 420”). The Company records employee termination benefits as an operating expense when it communicates the benefit arrangement to the employee and it requires no significant future services, other than a minimum retention period, from the employee to earn the termination benefits.

Comprehensive Income/(Loss)

Comprehensive income/(loss) consists of two components, net income/(loss) and other comprehensive income/(loss). Other comprehensive income/(loss) refers to revenue, expenses, gains and losses that under GAAP are recorded as an element of stockholders’ equity but are excluded from net income/(loss). The Company’s other comprehensive income/(loss) included foreign currency translation adjustments from those subsidiaries not using the U.S. Dollar as their functional currency, and a reclassification to net income/(loss) from the write-off of cumulative translation adjustment.

Business Combinations

The Company applies the accounting standard related to business combinations, Accounting Standard Codification 805, *Business Combinations* (“ASC 805”). The standard requires:

- recognition of assets acquired, liabilities assumed, and contingent consideration at their fair value on the acquisition date with subsequent changes recognized in earnings;
- acquisition-related expenses and restructuring costs to be recognized separately from the business combination and expensed as incurred;
- in-process research and development to be capitalized at fair value as an indefinite-lived intangible asset until completion or abandonment; and
- that changes in accounting for deferred tax asset valuation allowances and acquired income tax uncertainties after the measurement period be recognized as a component of provision for taxes.

The Company accounts for acquisitions of entities or assets that include inputs and processes and have the ability to create outputs as business combinations. The purchase price of the acquisition is allocated to tangible assets, liabilities, and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Acquisition-related expenses and restructuring costs are expensed as incurred. While the Company uses its best estimates and assumptions as a part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business combination date, these estimates and assumptions are inherently uncertain

and subject to refinement. As a result, during the preliminary purchase price allocation period, which may be up to one year from the business combination date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. After the preliminary purchase price allocation period, the Company records adjustments to assets acquired or liabilities assumed subsequent to the purchase price allocation period in its operating results in the period in which the adjustments were determined.

Operating Leases

The Company determines if an arrangement is a lease at inception. Its operating lease agreements are primarily for real estate space and are included within operating lease right of use (“ROU”) assets and operating lease liabilities on the consolidated balance sheets.

ROU assets represent the Company’s right to use an underlying asset for the lease term and operating lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and operating lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. As the Company’s leases do not provide an implicit rate, the Company uses its incremental borrowing rate, determined as the rate it would have incurred to borrow based on its credit quality at the inception of the lease over a similar term and in the economic environment where the leased asset is located, to calculate the present value of lease payments. ROU assets also exclude lease incentives. Many of the Company’s lease agreements include options to extend the lease, which the Company does not include in the minimum lease terms unless they are reasonably certain to be exercised. Rental expense for lease payments related to operating leases is recognized on a straight-line basis over the lease term.

The Company adopted Accounting Standard Codification 842, *Leases* (“ASC 842”) effective January 1, 2019 using the modified retrospective transition approach and chose to account for the impact of the adoption as of the effective date. The reported results for 2019 reflect the application of ASC 842 guidance while the reported results for 2018 were prepared under the guidance of Accounting Standard Codification 840, *Leases* (“ASC 840”), which is also referred to herein as “legacy GAAP” or the “previous guidance”.

The new standard provides a number of optional practical expedients in transition. The Company elected the ‘package of practical expedients’, which permits the Company to not reassess under the new standard for prior conclusions about lease identification, lease classification, and initial direct costs. The new standard also provides practical expedients for an entity’s ongoing accounting. The Company elected the short-term lease recognition exemption, and for those leases that qualified, the Company did not recognize ROU assets or lease liabilities, and this included not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. The Company also elected the practical expedient to not separate lease and non-lease components for all of its leases.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2016-02, *Leases*. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements* and ASU 2018-10, *Codification Improvements to Topic 842, Leases*. ASU 2016-02 and the subsequent modifications are identified as “ASC 842”. ASC 842 requires lessees to recognize most leases as assets and liabilities on the balance sheet. The Company adopted ASC 842 and its related amendments effective on January 1, 2019 using the modified retrospective transition approach. See Note 9 “Leases” for the required disclosures related to the impact of adopting this standard and a discussion of the Company’s updated policies related to leases.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805)*, which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on the Company’s consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The standard provides financial statement preparers with an option to reclassify stranded tax effects within Accumulated Other Comprehensive Loss to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (or portion thereof) is recorded. The Company adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The guidance simplifies the accounting for share-based payments made to non-employees so the accounting for such payments is substantially the same as those made to employees. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, *Codification Improvements*. This amendment makes changes to a variety of topics to clarify, correct errors in, or make minor improvements to the Accounting Standards Codification (ASC). The transition and effective date guidance is based on the facts and circumstances of each amendment. Some of the amendments do not require transition guidance and are effective upon issuance of the guidance. However, many of the amendments do have transition guidance with effective dates for annual periods beginning after December 15, 2018. The Company adopted this new standard on January 1, 2019. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. This new accounting standard update simplifies the measurement of goodwill by eliminating the Step 2 impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The new guidance requires an entity to compare the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. The new guidance becomes effective for goodwill impairment tests in fiscal years beginning after December 15, 2019, though early adoption is permitted. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*. This guidance adds, modifies and removes several disclosure requirements relative to the three levels of inputs used to measure fair value in accordance with Topic 820, Fair Value Measurement. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This guidance clarifies the accounting treatment for implementation, set-up, and other upfront costs incurred in computing arrangements (hosting arrangements) that are service contracts. Under the new guidance, customers will apply the same criteria for capitalizing implementation costs as they would for an arrangement that has a software license. This guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12 - *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. The new guidance removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. It also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. This guidance is effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements.

NOTE 2 — NET INCOME/(LOSS) PER SHARE

The Company computes basic net income/(loss) per share by dividing its net income/(loss) for the period by the weighted average number of common shares outstanding during the period.

Diluted net income per share is computed by dividing the net income attributable to common stockholders by the weighted-average number of common shares outstanding during the period, including potential dilutive common stock instruments.

	Year Ended December 31,		
	2019	2018	2017
Net income/(loss)	\$ 8,871	\$ (13,199)	\$ (97,570)
Shares used to compute net income/(loss) per share:			
Weighted average shares used to compute basic net income/(loss) per share	145,838	141,402	135,715
Dilutive potential common shares	11,545	—	—
Weighted average shares used to compute diluted net income/(loss) per share	157,383	141,402	135,715
Basic net income/(loss) per share	\$ 0.06	\$ (0.09)	\$ (0.72)
Diluted net income/(loss) per share	\$ 0.06	\$ (0.09)	\$ (0.72)

The following equity awards outstanding at the end of each period presented have been excluded from the computation of net income/(loss) per share of common stock for the periods presented because including them would have had an anti-dilutive effect:

	Year Ended December 31,		
	2019	2018	2017
Warrants to purchase common stock	1,292	1,600	3,267
Options to purchase common stock	2,303	18,491	16,932
RSUs	659	3,021	5,812
PSOs	2,369	3,512	—
PSUs	38	711	—
ESPP	369	283	376
Total	7,030	27,618	26,387

NOTE 3 — BUSINESS COMBINATIONS / DIVESTITURE

Divestiture of Moscow Studio

On December 31, 2017, the Company entered into the following agreements related to the divestiture of its Moscow-based game development studio (the “Moscow Studio”) through the sale of its wholly-owned UK subsidiary Glu Mobile (Russia) Limited (“GMRL”):

- Share Purchase Agreement (the “SPA”) between the Company and Saber Interactive (“Saber”);
- Transitional Services Agreement (the “TSA”) among the Company, Saber and MGL My.com (Cyprus) Limited (“MGL”); and
- Asset Purchase and License Agreement (the “APLA”) between the Company and MGL.

Pursuant to the SPA, Saber purchased all the issued and outstanding share capital of GMRL. Saber also assumed all obligations under the office lease for the Moscow Studio.

Under the TSA, Saber agreed to transition certain legacy titles from the Moscow Studio to the Company's Hyderabad studio. Upon successful completion of the transition (i) Saber paid the employees of the Moscow Studio and GMRL bonus payments of \$500 in the aggregate and reduced the cash consideration by the amount of the bonus, and (ii) certain employees of the Moscow studio and GMRL had the vesting of an aggregate of approximately 150 shares subject to equity awards accelerated.

Pursuant to the APLA, the Company sold four mobile games (and related intellectual property and other rights) developed by the Moscow Studio: (i) *Last Day Alive*, (ii) *Heroes of Destiny*, (iii) a game that was in development featuring a male celebrity, and (iv) *Furiosa*. The Company transferred all rights and obligations under certain contracts related to the game featuring a male celebrity, including, but not limited to, the obligation to pay the remaining approximately \$1,500 in minimum guarantee and other payments under these contracts. The Company also agreed to provide MGL with a non-exclusive, perpetual, worldwide, irrevocable, non-transferrable, royalty-free license to certain development tools and technology necessary to use, develop, publish, exploit and sell the purchased games and that MGL and/or its affiliates may use for the development of other of its products.

The total cash consideration under the SPA and APLA was \$3,226, of which \$1,726 was received in January 2018. The remaining \$1,500, net of a transition bonus payment of \$500, was received in April 2018 upon completion of the transition of the legacy titles from the Moscow Studio to the Company's Hyderabad studio.

In connection with the divestiture, the Company recorded a loss of \$6,459 in the year ended December 31, 2017, which is included in other expense on the consolidated statement of operations. This was primarily comprised of a \$10,000 charge related to the assignment of one of the contracts related to the male celebrity, a \$1,220 charge related to the write-off of goodwill associated with the Moscow studio and a \$479 charge related to the write-off of net assets associated with the Moscow studio. These charges were partially offset by \$3,226 in cash paid by Saber and MGL, \$1,500 related to the assumption of obligations by MGL under the contract related to the male celebrity, and \$514 related to the transition services provided by Saber.

In connection with the activities related to the transition under the TSA, the Company recorded the following expenses in the year ended December 31, 2018:

- \$500 related to bonuses that became due to the employees of the Moscow Studio and GMRL;
- \$514 related to the vesting of 147 shares subject to equity awards held by certain employees of the Moscow Studio and GMRL; and
- \$515 related to the amortization of transition services assets that were capitalized as part of the transaction consideration.

The Company's divestiture of the Moscow Studio was part of the Company's efforts to consolidate its studio locations, focusing on a new scaled creative center in San Francisco and a low cost, repeatable location in Hyderabad, India. This divestiture was not presented in discontinued operations in the consolidated statement of operations, because it did not represent a strategic shift in the Company's business and is not expected to have a significant effect on the Company's operations or financial results, as the Company continued operating similar businesses after the divestiture.

Dairy Free Games, Inc.

On August 1, 2017 (the "Merger Date"), the Company completed the acquisition of Dairy Free Games, Inc. ("Dairy Free") by acquiring 100% of its equity pursuant to an Agreement and Plan of Merger (the "Dairy Free Merger Agreement") by and among the Company, Winterfell Acquisition Corp., a Delaware corporation and wholly owned subsidiary of the Company, and Dairy Free. Dairy Free, which was based in California, was building a mobile real-time strategy game. The Company acquired Dairy Free in order to expand its game offerings on smartphones and tablets.

Pursuant to the terms of the Dairy Free Merger Agreement, the Company paid \$2,000 in cash for the outstanding common stock of Dairy Free. The Company had previously acquired from Dairy Free shares of its series A preferred stock ("Series A Preferred Stock"), as further described below, for \$2,000. The fair value of the Series A Preferred Stock as of the Merger Date was determined to be equal to the original investment amount of \$2,000. The transaction was accounted for as a business combination under the acquisition method of accounting.

The Company allocated the purchase price to the individually identifiable assets acquired and liabilities assumed based on their estimated fair values on the acquisition date. The excess of the purchase price over those fair values was recorded as goodwill. The determination of these fair values was based on estimates and assumptions requiring significant judgments. While the Company believes that its estimates and assumptions underlying the valuations are reasonable, different estimates and assumptions could result in different valuations assigned to the individual assets acquired and liabilities assumed, and the resulting amount of goodwill. The following table summarizes the fair values of assets acquired and liabilities assumed at the date of acquisition:

Assets acquired:	
Cash and cash equivalents	\$ 341
Intangible assets:	
In-process research and development	2,700
Other current assets	32
Goodwill	573
Total assets	3,646
Liabilities assumed:	
Deferred tax liability	(294)
Other accrued liabilities	(2)
Total liabilities assumed	(296)
Net acquired assets	\$ 3,350

In-process research and development included in the table above was related to a game that Dairy Free was in process of developing as of the valuation date. During the year ended December 31, 2018, the Company decided not to proceed with further development of that game and recorded an impairment charge of \$2,700 for the related in-process research and development in Impairment and amortization of intangible assets expense in its consolidated statements of operations. Pursuant to ASC 805, the Company incurred and expensed a total of \$611 in acquisition and transitional costs associated with the acquisition of Dairy Free during the year ended December 31, 2017. These costs consisted of \$269 of research and development expense and \$342 of general and administrative expense.

The Company allocated the residual value of \$573 to goodwill. The goodwill recognized is attributable primarily to expected synergies and the assembled workforce of Dairy Free. Goodwill will not be amortized but will be tested for impairment at least annually. Goodwill created as a result of the Dairy Free acquisition is not deductible for tax purposes.

Valuation Methodology

The fair value of the in-process research and development acquired from Dairy Free was determined using the replacement cost method under the cost approach. The replacement cost was estimated based on the historical research and development expenses incurred, adjusted for an estimated developer's profit and rate of return in accordance with accepted valuation methodologies.

Pro Forma Financial Information

The results of operations for Dairy Free and the estimated fair market values of the assets acquired and liabilities assumed have been included in the Company's consolidated financial statements since the date of acquisition. For the year ended December 31, 2017 and since the date of its acquisition, Dairy Free had no impact on the Company's gross revenue and increased the Company's net losses by \$1,081. The unaudited pro forma financial information below

includes the business combination accounting effects of the acquisition, including amortization charges from acquired intangible assets. The pro forma financial information presented below is for informational purposes only, and is subject to a number of estimates, assumptions and other uncertainties.

	Year ended December 31, (unaudited) 2017
Total pro forma revenue	\$ 286,827
Pro forma net loss	(98,450)
Pro forma net loss per share - basic	(0.73)
Pro forma net loss per share - diluted	(0.73)

NOTE 4 — FAIR VALUE MEASUREMENTS

As of December 31, 2019, the Company's financial assets and financial liabilities are presented below at fair value and were classified within the fair value hierarchy as follows:

	Level 1	Level 2	Level 3	December 31, 2019
Financial Assets				
Cash and cash equivalents	\$ 127,053	\$ —	\$ —	\$ 127,053
Other investments	—	—	1,565	1,565
Total financial assets	<u>\$ 127,053</u>	<u>\$ —</u>	<u>\$ 1,565</u>	<u>\$ 128,618</u>

As of December 31, 2018, the Company's financial assets and financial liabilities are presented below at fair value and were classified within the fair value hierarchy as follows:

	Level 1	Level 2	Level 3	December 31, 2018
Financial Assets				
Cash and cash equivalents	\$ 97,834	\$ —	\$ —	\$ 97,834
Restricted cash	110	—	—	110
Other investments	—	—	1,410	1,410
Total financial assets	<u>\$ 97,944</u>	<u>\$ —</u>	<u>\$ 1,410</u>	<u>\$ 99,354</u>

The Company's cash and cash equivalents, which were held in operating bank accounts and money market funds, are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. In addition, the Company's restricted cash is classified within Level 1 of the fair value hierarchy. The carrying value of accounts receivable and payables approximates fair value due to the short time to expected payment or receipt of cash. The carrying value of other investments approximates fair value, as there have been no events or changes in circumstances that would have had a significant effect on the fair value of these investments at December 31, 2019.

NOTE 5 – REVENUE FROM CONTRACTS WITH CUSTOMERS

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method applied to those contracts not yet substantially completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under the new revenue standard, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historical accounting policies and practices. The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an \$8,826 adjustment to accumulated deficit as of the adoption date.

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers for the year ended December 31, 2019:

	Year Ended December 31,		
	2019	2018	2017
In-App Purchases (over-time revenue recognition)	\$ 360,598	\$ 316,157	\$ 244,314
Advertisements and offers (point-in-time revenue recognition)	50,728	50,121	41,154
Other (point-in-time revenue recognition)	55	283	1,359
Total revenue	<u>\$ 411,381</u>	<u>\$ 366,561</u>	<u>\$ 286,827</u>

The Company reports as a single segment – mobile games. In the disaggregation above, the Company categorizes revenue by type, and by over-time or point-in-time recognition.

Contract Balances

The following table provides information about receivables, contracts assets, and contract liabilities from contracts with customers:

	December 31,	
	2019	2018
Receivables, which are included in accounts receivable, net	\$ 29,304	\$ 27,325
Contract liabilities, which are included in deferred revenue	\$ 97,629	\$ 85,736

The Company receives payments from customers based on billing terms established in the Company's contracts. Contract asset relates to the Company's right to consideration for its completed performance under the contract. At December 31, 2019 and December 31, 2018, there were no contract assets recorded in the Company's consolidated balance sheet. Accounts receivable are recorded when the right to consideration becomes unconditional.

Deferred revenue relates to payments received in advance of performance under the contract. Deferred revenue is recognized as revenue as the Company performs under the contract. The Company had \$85,736 in deferred revenue as of December 31, 2018, which was all earned in the year ended December 31, 2019. The Company had \$67,788 in deferred revenue as of December 31, 2017, which was all earned in the year ended December 31, 2018.

NOTE 6 — BALANCE SHEET COMPONENTS

Accounts Receivable, Net

	December 31,	
	2019	2018
Accounts receivable	\$ 29,304	\$ 27,325
Less: Allowance for doubtful accounts	—	—
Accounts receivable, net	<u>\$ 29,304</u>	<u>\$ 27,325</u>

Accounts receivable include amounts billed and unbilled as of the respective balance sheet dates, but net of platform commissions to the Company's Digital Storefronts.

Changes in the Company's allowance for doubtful accounts were as follows:

Description	Balance at Beginning of Year	Additions	Release of Allowance	Balance at End of Year
Year ended December 31, 2019	\$ —	\$ —	\$ —	\$ —
Year ended December 31, 2018	\$ 837	\$ —	\$ (837)	\$ —
Year ended December 31, 2017	\$ 837	\$ —	\$ —	\$ 837

The Company had no significant write-offs or recoveries during the years ended December 31, 2019, 2018, and 2017.

Property and Equipment, Net

	December 31,	
	2019	2018
Computer equipment	\$ 9,079	\$ 7,281
Furniture and fixtures	2,201	2,076
Software	3,612	3,394
Leasehold improvements	16,121	11,230
Total	31,013	23,981
Less: Accumulated depreciation and amortization	(13,370)	(10,093)
Property and equipment, net	<u>\$ 17,643</u>	<u>\$ 13,888</u>

Depreciation for the years ended December 31, 2019, 2018, and 2017 was \$4,225, \$3,855, and \$3,195, respectively.

NOTE 7 – CASH, CASH EQUIVALENTS AND RESTRICTED CASH

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same amounts shown in the statements of cash flows:

	Year Ended December 31,		
	2019	2018	2017
Cash and cash equivalents at beginning of period	\$ 97,834	\$ 63,764	\$ 102,102
Restricted cash at beginning of the period	110	602	1,312
Cash, cash equivalents and restricted cash at beginning of period	<u>\$ 97,944</u>	<u>\$ 64,366</u>	<u>\$ 103,414</u>
Cash and cash equivalents at end of period	127,053	97,834	63,764
Restricted cash at end of the period	—	110	602
Cash, cash equivalents and restricted cash at end of period	<u>\$ 127,053</u>	<u>\$ 97,944</u>	<u>\$ 64,366</u>

The Company did not have restricted cash as of December 31, 2019. The Company's restricted cash is included in current assets as of December 31, 2018, and 2017, respectively.

NOTE 8 — GOODWILL AND INTANGIBLE ASSETS

Intangible Assets

The Company's intangible assets were acquired primarily in various acquisitions as well as in connection with the purchase of certain trademarks, brand assets and licensed content. The carrying amounts and accumulated amortization expense of the acquired intangible assets at December 31, 2019 and December 31, 2018 were as follows:

		December 31, 2019			December 31, 2018		
	Estimated Useful Life	Gross Carrying Value	Accumulated Amortization Expense	Net Carrying Value	Gross Carrying Value	Accumulated Amortization Expense	Net Carrying Value
Intangible assets amortized to cost of revenue:							
Titles, content and technology	3 - 5 yrs	\$ 21,117	\$ (16,359)	\$ 4,758	\$ 21,117	\$ (12,203)	\$ 8,914
Customer contracts and related relationships	5 yrs	700	(700)	—	700	(648)	52
Trademarks	7 yrs	5,000	(5,000)	—	5,000	(4,821)	179
		\$ 26,817	\$ (22,059)	\$ 4,758	\$ 26,817	\$ (17,672)	\$ 9,145

Acquisition-related intangibles included in the above table are finite-lived and are being amortized on a straight-line basis over their estimated lives, which approximate the pattern in which the economic benefits of the intangible assets are realized. The Company has included amortization of acquired intangible assets directly attributable to revenue-generating activities in cost of revenue.

During the year ended December 31, 2018, the Company decided not to proceed with further development of one of its games and recorded an impairment charge of \$2,700 for the related in-process research and development in Impairment and amortization of intangible assets expense in its consolidated statement of operations.

During the years ended December 31, 2019, 2018 and 2017, the Company recorded amortization and impairment expense in the amounts of \$4,387, \$9,119 and \$10,331, respectively, in cost of revenue. No amortization expense was recorded in operating expenses for the years ended December 31, 2019, 2018, and 2017.

As of December 31, 2019, the total expected future amortization related to intangible assets was as follows:

Year Ending December 31,	Amortization to Be Included in Cost of Revenue
2020	\$ 3,258
2021	1,500
Total intangible assets	\$ 4,758

Goodwill

The Company had \$116,227 in goodwill as of December 31, 2019 and December 31, 2018, respectively.

During the third quarters of fiscal 2019 and 2018, the Company performed a "Step 0" qualitative assessment for its reporting unit. Based on the assessment, the Company concluded that it was more likely than not that the fair value of the reporting unit was greater than its carrying amount, and as a result, did not proceed to further impairment testing. Accordingly, the Company did not recognize an impairment of goodwill during the years ended December 31, 2019 and December 31, 2018.

NOTE 9 — LEASES

The Company currently leases real estate space under non-cancelable operating lease agreements for its corporate headquarters in San Francisco, California and its operations in Toronto, Canada, Hyderabad, India, Foster City, California, and Burlingame, California. Additionally, the Company leases office space in Long Beach, California which it has sub-leased as it no longer has business operations in that location. These operating leases have remaining lease terms ranging from 3 months to 7.92 years, some of which include the option to extend the lease, with the longest extension option being 6 years.

Certain of the Company's lease agreements contain lease components (for example, fixed payments such as rent) and non-lease components such as common-area maintenance costs. Both of these types of provisions are accounted for as a single lease component. For such arrangements, there may be a variability in future lease payments as the amount of the non-lease components is typically revised from one period to the next. These variable lease payments, which are primarily comprised of common-area maintenance, utilities, and real estate taxes that are passed on from the lessor in proportion to the space leased by the Company within the entire building or building complex, are recognized in the period in which the obligation for those payments is incurred.

The Company does not include any of its renewal options when calculating its lease liability as the Company is not reasonably certain whether it will exercise these renewal options at this time. The weighted-average remaining non-cancelable lease term for the Company's operating leases was 7.55 years for the year ended December 31, 2019. The weighted-average discount rate was 6.7% for the year ended December 31, 2019. Rent expense for the year ended December 31, 2019, 2018, and 2017 was \$5,311, \$5,759, and \$4,472, respectively.

Adoption of the lease standard had a material impact on the Company's consolidated balance sheets. See the table below for the impact of adoption of the lease standard on the Company's consolidated balance sheet as of January 1, 2019:

	As Previously Reported December 31, 2018	New Lease Standard Adjustment	As Adjusted January 1, 2019
Operating lease right of use assets	\$ —	28,345	\$ 28,345
Short-term operating lease liabilities	—	3,732	3,732
Long-term operating lease liabilities	—	30,197	30,197
Deferred rent payable*	\$ 5,284	(5,284)	\$ —

* As of December 31, 2018, \$122 and \$5,162 of Deferred rent payable is included within the Accounts payable and Other long-term liabilities line items on the consolidated balance sheet, respectively.

The future minimum lease payments to be paid under noncancelable leases in effect at December 31, 2019, are as follows:

Year Ending December 31,	Operating Leases
2020	4,587
2021	6,999
2022	6,927
2023	6,964
2024 and thereafter	27,667
Total lease payments	\$ 53,144
Less: imputed interest	(12,265)
Total	\$ 40,879

Supplemental information related to the Company's leases for the year ended December 31, 2019 is as follows:

	Year Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 5,832
	Year Ended December 31, 2019
Right of use assets obtained in exchange for new lease obligations:	
Operating leases	\$ 11,231

NOTE 10 — COMMITMENTS AND CONTINGENCIES

Minimum Guaranteed Royalties and Developer Commitments

The Company has entered into license and publishing agreements with various celebrities, athletes, sports and entertainment organizations, and other well-known brands and properties to develop and publish games for mobile devices. Pursuant to some of these agreements, the Company is required to make minimum guaranteed royalty payments regardless of revenue generated by the applicable game, which may not be dependent on any deliverables. The significant majority of these minimum guaranteed royalty payments are recoupable against future royalty obligations that would otherwise become payable, or in certain circumstances, where not recoupable, are capitalized and amortized over the lesser of (1) the estimated life of the title incorporating licensed content or (2) the term of the license agreement.

At December 31, 2019, future unpaid minimum guaranteed royalty commitments were as follows:

	Future Minimum Guarantee Commitments
2020	\$ 11,540
2021	10,160
2022	6,150
2023	6,150
2024	6,150
	<u>\$ 40,150</u>

The amounts represented in the table above reflect the Company's minimum cash obligations for the respective calendar years, but do not necessarily represent the periods in which they will be expensed in the Company's consolidated financial statements.

Licensor commitments include \$40,150 of commitments due to licensors that have been recorded in current and long-term liabilities and a corresponding amount in current and long-term assets because payment is not contingent upon performance by the licensor. The classification of commitments between long-term and short-term is determined based on the timing of recoupment of earned royalties calculated on projected revenue for the licensed intellectual property games.

Income Taxes

As of December 31, 2019, unrecognized tax benefits have been netted against deferred tax assets and potential interest and penalties are classified within "other long-term liabilities" on the Company's consolidated balance sheets.

Indemnification Arrangements

The Company has entered into agreements under which it indemnifies each of its officers and directors during his or her lifetime for certain events or occurrences while the officer or director is or was serving at the Company's request in that capacity. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future amounts paid. Accordingly, the Company had recorded no liabilities for these agreements as of December 31, 2019, and 2018.

In the ordinary course of its business, the Company includes standard indemnification provisions in most of its commercial agreements with Digital Storefronts and licensors. Pursuant to these provisions, the Company generally indemnifies these parties for losses suffered or incurred in connection with its games, including as a result of intellectual property infringement, viruses, worms and other malicious software, and legal or regulatory violations. The term of these indemnity provisions is generally perpetual after execution of the corresponding license agreement, and the maximum potential amount of future payments the Company could be required to make under these provisions is often unlimited. To date, the Company has not incurred costs to defend lawsuits or settle indemnified claims of these types. As a result, the Company believes the estimated fair value of these indemnity provisions is minimal. Accordingly, the Company had recorded no liabilities for these provisions as of December 31, 2019 and 2018.

Contingencies

From time to time, the Company is subject to various claims, complaints and legal actions in the normal course of business. The Company assesses its potential liability by analyzing specific litigation and regulatory matters using available information. The Company's estimate of losses is developed in consultation with inside and outside counsel, which involves a subjective analysis of potential results and outcomes, assuming various combinations of appropriate litigation and settlement strategies. After taking all of the above factors into account, the Company determines whether an estimated loss from a contingency should be accrued by assessing whether a loss is deemed reasonably probable and the amount can be reasonably estimated. The Company further determines whether an estimated loss from a contingency should be disclosed by assessing whether a material loss is deemed reasonably possible. Such disclosure will include an estimate of the additional loss or range of loss or will state that an estimate cannot be made.

On March 14, 2018, Jeffrey Tseng, the former Chief Executive Officer of Crowdstar, filed a complaint in the Superior Court of the State of California for the County of Santa Clara against Time Warner Inc., Rachel Lam, Intel Capital Corporation, Middlefield Ventures Inc. and Jose Blanc (collectively, the "Non-Glu Defendants"), the Company and additional yet-to-be-named defendants. The complaint alleged (i) breach of fiduciary duty by the Non-Glu Defendants, (ii) aiding and abetting breach of fiduciary duty by the Company and (iii) intentional interference with contract, intentional interference with prospective economic advantage, negligent interference with prospective economic advantage and unfair competition by each of the defendants, in each case relating to circumstances arising from the Company's acquisition of Crowdstar and the events leading up to the acquisition. Mr. Tseng was seeking compensatory damages and exemplary damages, each in an amount to be determined at trial, along with costs of suit, reasonable attorneys' fees and such other relief as the Court may deem proper. The Company and the Non-Glu Defendants filed demurrers in response to Mr. Tseng's complaint on August 17, 2018, Mr. Tseng filed responses to these demurrers on September 17, 2018, and the Company and the Non-Glu Defendants filed reply briefs in support of their demurrers on October 15, 2018. A hearing with respect to the demurrers was held on November 30, 2018. On January 24, 2019, the judge issued an order sustaining the demurrers on all six claims and gave Mr. Tseng 10 days' leave to amend his complaint. On March 4, 2019, the Company, the Non-Glu Defendants and Mr. Tseng entered into a settlement agreement pursuant to which Mr. Tseng, on one hand, and the Company and the Non-Glu Defendants, on the other hand, provided mutual releases of claims related to the subject matter of Mr. Tseng's lawsuit and Mr. Tseng agreed to dismiss his lawsuit with prejudice. The Company did not pay any amounts to Mr. Tseng in settlement of this matter. Mr. Tseng dismissed his lawsuit with prejudice on March 6, 2019 and, accordingly, the Company considers this matter to be resolved.

The Company does not believe it is party to any currently pending litigation, the outcome of which is reasonably possible to have a material adverse effect on its operations, financial position or liquidity. However, the ultimate outcome of any litigation is uncertain and, regardless of outcome, litigation can have an adverse impact on the Company because of defense costs, potential negative publicity, diversion of management resources and other factors.

NOTE 11 — STOCKHOLDERS' EQUITY

Common Stock

At December 31, 2019, the Company was authorized to issue 250,000 shares of common stock. As of December 31, 2019, the Company had reserved 39,468 shares for future issuance under its stock plans and outstanding warrants.

Preferred Stock

At December 31, 2019, the Company was authorized to issue 5,000 shares of preferred stock.

Warrants to Purchase Common Stock

Celebrity Warrants

During 2014 and 2015, the Company issued warrants to celebrity licensors, and entities affiliated with one of the celebrity licensors, to purchase up to an aggregate of 1,600 shares of the Company's common stock, subject to adjustments for dividends, reorganizations and other common stock events (collectively, the "Celebrity Warrants"). With respect to Celebrity Warrants covering 1,000 shares, such warrants vested with respect to 50% of the underlying shares upon public announcement of the related license agreement, with the remaining shares vesting in equal monthly installments over 24 months from September 2017. With respect to warrants covering 500 shares issued in 2014, such warrants vested in equal monthly installments over 60 months term of the license agreement with the applicable celebrity, subject to full acceleration of vesting under specified circumstances, as stipulated in such license agreement. One of the acceleration conditions for these warrants was satisfied in April 2017 which resulted in full vesting of the remaining warrants. With respect to the remaining Celebrity Warrants covering 100 shares issued in 2015, such warrants vest in equal monthly installments over 60 months term of the license agreement with the applicable celebrity, subject to full acceleration of vesting under specified circumstances, as stipulated in such license agreement. The warrants were fully vested as one of the acceleration conditions for these warrants had been satisfied.

As of December 31, 2019, Celebrity Warrants covering 1,600 shares of the Company's common stock were outstanding. These warrants have a weighted average exercise price of \$4.61 per share and an average contractual term of 5.44 years.

During the years ended December 31, 2019, 2018 and 2017, the Company recorded \$0, \$1,046 and \$569, respectively, of non-cash warrant related expense in cost of revenue as the mobile games featuring these celebrities licensors were not expected to generate meaningful revenue over their lifetime.

The Company estimated the fair value of the warrants using the Black-Scholes valuation model and the weighted average assumptions noted in the following table:

	Year Ended December 31,		
	2019	2018	2017
Dividend yield	—%	—%	—%
Risk-free interest rate	—%	2.53%	1.65%
Expected volatility	—%	56.73%	51.81%
Expected term (in years)	—	3.51	3.52

During the years ended December 31, 2019, and 2018, warrant holders did not exercise warrants to purchase shares of the Company's stock. During the year ended December 31, 2017, warrant holders exercised warrants to purchase 1,000 shares of the Company's common stock, and the Company received gross proceeds of \$3,000 in connection with these exercises.

NOTE 12 — STOCK OPTION AND OTHER BENEFIT PLANS

2007 Equity Incentive Plan

In 2007, the Company's Board of Directors adopted, and the Company's stockholders approved, the 2007 Equity Incentive Plan (the "2007 Plan"). The 2007 Plan permits the Company to grant stock options, RSUs, PSUs, PSOs and other stock-based awards to employees, non-employee directors and consultants.

In April 2017, the Company's Board of Directors approved, and in June 2017, the Company's stockholders approved, the Third Amended and Restated 2007 Equity Incentive Plan (the "Third Amended 2007 Plan"). The Third Amended 2007 Plan includes an increase of 8,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan. It also includes (i) a minimum vesting requirement, pursuant to which each share that is subject to a stock-based award may not vest prior to the first anniversary of the date of grant of such stock-based award (subject to a carve-out of 5% of the shares reserved for issuance under the plan) and (ii) a limitation on the value of stock-based awards that may be granted to any non-employee director in any calendar year.

In April 2018, the Company's Board of Directors approved, and in June 2018, the Company's stockholders approved, the Fourth Amended and Restated 2007 Equity Incentive Plan (the "Fourth Amended 2007 Plan"). The Fourth Amended 2007 Plan includes an increase of 10,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan. It also removed the limitation on the number of shares that can be issued in any calendar year to a participant.

In April 2019, the Company's Board of Directors approved, and in June 2019, the Company's stockholders approved, the fifth Amended and Restated 2007 Equity Incentive Plan (the "Fifth Amended 2007 Plan"). The Fifth Amended 2007 Plan includes an increase of 4,600 shares in the aggregate number of shares of common stock authorized for issuance under the plan.

The Company may grant options under the 2007 Plan at prices no less than 85% of the estimated fair value of the shares on the date of grant as determined by its Board of Directors, provided, however, that (i) the exercise price of an incentive stock option ("ISO") or non-qualified stock options ("NSO") may not be less than 100% or 85%, respectively, of the estimated fair value of the underlying shares of common stock on the grant date, and (ii) the exercise price of an ISO or NSO granted to a 10% stockholder may not be less than 110% of the estimated fair value of the shares on the grant date. The fair value of the Company's common stock is determined by the last sale price of such stock on the Nasdaq Global Select Market on the date of determination. The stock options granted to employees generally vest with respect to 25% of the underlying shares one year from the vesting commencement date and with respect to an additional 1/48 of the underlying shares per month thereafter. Stock options granted during 2007 before October 25, 2007 and after June 4, 2015 have a contractual term of ten years and stock options granted on or after October 25, 2007 and before June 4, 2015 have a contractual term of six years.

As of December 31, 2019, 2,686 shares were available for future grants under the Fifth Amended 2007 Plan.

Performance-based equity awards

In 2017, the Company revised its executive compensation program to emphasize a pay-for-performance culture by (1) eliminating annual cash bonus plans for the Company's C-suite executives and corporate vice presidents and eliminating 50% of the annual cash bonus opportunity for the Company's creative leaders for 2018 and replacing these executives' respective annual cash bonus opportunity with PSOs and (2) having a significant portion of each of these executives' annual equity award be comprised of either PSOs and PSUs in addition to standard time vesting stock options.

In 2018, the Company determined to continue to emphasize a pay-for-performance culture by (1) eliminating cash bonuses for C-Suite members for 2019 and replacing their cash bonus opportunity with PSOs and eliminating 50% of the annual cash bonus opportunity for the Company's creative leaders and replacing their cash bonus opportunity with PSUs; (2) having a significant portion of C-Suite members' annual equity award be comprised of PSOs in addition to standard time vesting stock options; (3) having a significant portion of corporate vice presidents' annual equity award be comprised of PSUs in addition to standard time vesting stock options; and (4) having each creative leader's annual equity award be comprised solely of PSUs.

In 2019, the Company again determined to continue to emphasize a pay-for-performance culture by (1) eliminating cash bonuses for C-Suite members and certain other executives for 2020 and replacing their cash bonus opportunity with PSUs and (2) having a significant portion of each executive's annual equity award be comprised of PSUs in addition to standard time vesting RSUs.

In addition to the performance-based equity awards described above, the Company also awarded PSUs in 2019 to certain key non-executive employees in the Company. These performance-based awards are subject to the achievement of specified annual performance goals. They become eligible to vest only if the applicable performance goals are achieved and will vest only if the grantee remains employed with the Company through each applicable vesting date. The fair value of these awards is estimated on the date of grant. If the performance goals are not met as of the end of the performance period, no compensation expense is recognized and any previously recognized expense is reversed. The expected cost is based on the awards that are probable to vest and is recognized over the service period.

The performance-based awards issued in lieu of cash bonuses in 2017, 2018 and 2019 will vest, if the applicable performance goals are achieved, on February 15, 2019, February 15, 2020 and February 15, 2021, respectively. The performance-based awards issued as part of annual equity awards in 2017, 2018 and 2019 will vest, if the applicable performance goals are achieved, ratably in three annual tranches starting from February 15, 2019 and February 15, 2020 and February 15, 2021 respectively. The number of shares that may vest under these programs ranges from 0% to 200% of the target amounts and will be determined based on the achievement of specified annual performance goals. The PSUs awarded to certain key non-executive employees in 2019 will vest in June 2020 and December 2020 based on the achievement of specified annual performance goals.

The awards under these programs were granted under the 2007 Plan.

2007 Employee Stock Purchase Plan

In 2007, the Company's Board of Directors adopted and the Company's stockholders approved, the 2007 Employee Stock Purchase Plan (the "2007 Purchase Plan"). The Company initially reserved 667 shares of its common stock for issuance under the 2007 Purchase Plan. On each January 1 for the first eight calendar years after the first offering date, the aggregate number of shares of the Company's common stock reserved for issuance under the 2007 Purchase Plan was increased automatically by the number of shares equal to 1% of the total number of outstanding shares of the Company's common stock on the immediately preceding December 31, provided that the Board of Directors had the power to reduce the amount of the increase in any particular year and provided further that the aggregate number of shares issued over the term of this plan may not exceed 5,333. The 2007 Purchase Plan permits eligible employees, including employees of certain of the Company's subsidiaries, to purchase common stock at a discount through payroll deductions during defined offering periods. The price at which the stock is purchased is equal to the lower of 85% of the fair market value of the common stock at the beginning of an offering period or after a purchase period ends.

In January 2009, the 2007 Purchase Plan was amended to provide that the Compensation Committee of the Company's Board of Directors may fix a maximum number of shares that may be purchased in the aggregate by all participants during any single offering period (the "Maximum Offering Period Share Amount"). The Compensation Committee may raise or lower the Maximum Offering Period Share Amount. The Compensation Committee established the Maximum Offering Period Share Amount of 500 shares for the offering period that commenced on February 15, 2009 and ended on August 14, 2009, and a Maximum Offering Period Share Amount of 200 shares for each offering period thereafter. In February 2016, the Committee increased the Maximum Offering Period Share Amount for the offering period that started on February 22, 2016 and for each subsequent offering period to 450 shares.

In April 2017, the Company's Board of Directors approved, and in June 2017, the Company's stockholders approved the Amended and Restated 2007 Employee Stock Purchase Plan (the "Amended 2007 Purchase Plan"). The Amended 2007 Purchase Plan includes an increase of 4,000 shares in the aggregate number of shares of common stock authorized for issuance under the plan and removal of the expiration date of the plan.

As of December 31, 2019, 2,787 shares were available for issuance under the 2007 Purchase Plan.

2018 Equity Inducement Plan

In April 2018, the Compensation Committee of the Company's Board of Directors adopted the 2018 Equity Inducement Plan (the "2018 Plan") to replace the Inducement Plan. The Company did not seek stockholder approval for the 2018 Plan. As such, awards under the Inducement Plan will be granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director of the Company, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with the Company. The Company may grant NSOs under the Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of its Board of Directors. The fair value of the Company's common stock is determined by the last sale price of such stock on the Nasdaq Global Select Market on the date of determination. The Company initially reserved 400 shares of common stock for issuance under the 2018 Plan.

As of December 31, 2019, 156 shares were reserved for future grants under the 2018 Inducement Plan.

RSU Activity

A summary of the Company's RSU activity is as follows:

	Number of Units Outstanding	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Awarded and unvested, December 31, 2016	8,224	\$ 3.33		
Granted	2,360	\$ 2.31		
Vested	(2,863)	\$ 3.45		
Forfeited	(1,909)	\$ 3.01		
Awarded and unvested, December 31, 2017	5,812	\$ 2.96		
Granted	278	\$ 5.90		
Vested	(2,648)	\$ 3.24		
Forfeited	(421)	\$ 2.71		
Awarded and unvested, December 31, 2018	3,021	\$ 3.01		
Granted	2,936	\$ 6.84		
Vested	(1,688)	\$ 3.27		
Forfeited	(318)	\$ 4.17		
Awarded and unvested, December 31, 2019	<u>3,951</u>	<u>\$ 5.66</u>	1.51	\$ 23,905

PSU Activity

The following table summarizes the Company's PSU activity:

	Number of Units Outstanding	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Awarded and unvested, December 31, 2016	-	\$ -		
Granted	661	\$ 3.59		
Awarded and unvested, December 31, 2017	661	\$ 3.59		
Granted	2,909	\$ 5.85		
Forfeited	(40)	\$ 4.03		
Awarded and unvested, December 31, 2018	3,530	\$ 5.45		
Granted	2,780	\$ 6.46		
Vested	(700)	\$ 4.59		
Forfeited	(193)	\$ 6.14		
Awarded and unvested, December 31, 2019	<u>5,417</u>	<u>\$ 6.06</u>	1.32	\$ 32,769
PSUs expected to vest at December 31, 2019	276	\$ 3.61	0.13	\$ 1,667

PSO Activity

The following table summarizes the Company's PSO activity:

	<u>Number of Shares Outstanding</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Term (Years)</u>	<u>Aggregate Intrinsic Value</u>
Balance as of December 31, 2016	-	\$ -		
Granted	4,246	\$ 3.60		
Forfeited	(76)	\$ 3.97		
Balance as of December 31, 2017	4,170	\$ 3.59		
Granted	2,737	\$ 5.87		
Forfeited	(151)	\$ 3.59		
Balance as of December 31, 2018	6,756	\$ 4.51		
Exercised	(173)	\$ 3.59		
Balance as of December 31, 2019	<u>6,583</u>	<u>\$ 4.54</u>	8.15	\$ 10,765
PSOs expected to vest at December 31, 2019	409	\$ 3.60	7.85	\$ 1,002
PSO exercisable at December 31, 2019	3,339	\$ 3.60	7.80	\$ 8,188

Stock Option Activity

The following table summarizes the Company's stock option activity:

	<u>Options Outstanding</u>			
	<u>Number of Shares</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Term (Years)</u>	<u>Aggregate Intrinsic Value</u>
Balances at December 31, 2016	15,813	\$ 2.74		
Options granted	5,346	\$ 3.10		
Options canceled	(2,716)	\$ 3.16		
Options exercised	(1,511)	\$ 2.73		
Balances at December 31, 2017	16,932	\$ 2.78		
Options granted	6,092	\$ 4.82		
Options canceled	(1,213)	\$ 3.54		
Options exercised	(3,320)	\$ 2.88		
Balances at December 31, 2018	18,491	\$ 3.39		
Options granted	815	\$ 7.58		
Options canceled	(1,219)	\$ 4.73		
Options exercised	(1,799)	\$ 2.81		
Balances at December 31, 2019	<u>16,288</u>	<u>\$ 3.56</u>	7.08	\$ 42,165
Options exercisable at December 31, 2019	9,846	\$ 3.21	6.67	\$ 28,331

The Company has computed the aggregate intrinsic value amounts disclosed in the above table based on the difference between the original exercise price of the options and the fair value of the Company's common stock of \$6.05 per share at December 31, 2019. The total intrinsic value of awards exercised during the years ended December 31, 2019, 2018 and 2017 was \$7,806, \$10,957, and \$1,732, respectively.

Stock-Based Compensation

The Company recognizes stock-based compensation expense in accordance with ASC 718, and has estimated the fair value of each option award on the grant date using the Black-Scholes option valuation model and the weighted average assumptions noted in the following tables.

Performance Stock Options

	Year Ended December 31,		
	2019	2018	2017
Dividend yield	—%	—%	—%
Risk-free interest rate	—%	2.89%	2.07%
Expected volatility	—%	60.2%	63.3%
Expected term (years)	—	5.98	5.81

Stock Options

	Year Ended December 31,		
	2019	2018	2017
Dividend yield	—%	—%	—%
Risk-free interest rate	1.88%	2.63%	1.76%
Expected volatility	57.2%	57.9%	57.8%
Expected term (years)	4.00	4.00	4.00

The expected term of stock options gave consideration to early exercises, post-vesting cancellations and the options' contractual term ranging from 6 to 10 years. The Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term for the PSOs as the Company has not granted such awards in the past. As a result, the Company used the simplified method to calculate the expected term estimate based on the vesting and contractual terms of the PSOs. Under the simplified method, the expected term is equal to the average of the stock-based awards vesting period and their contractual term. The PSOs have a contractual term of 10 years. The risk-free interest rate for the expected term of the option is based on the U.S. Treasury Constant Maturity Rate as of the date of grant. The Company based its expected volatility on its own historical volatility for the year ended December 31, 2019, 2018, and 2017, respectively. The weighted-average fair value of stock options granted during the year ended December 31, 2019, 2018 and 2017 was \$3.44, \$2.25 and \$1.42 per share, respectively. The Company did not grant any PSOs in the year ended December 31, 2019. The weighted average fair value of the PSOs granted during the year ended December 31, 2018 and 2017 was \$3.38 and \$2.09, respectively.

The cost of RSUs and PSUs are determined using the fair value of the Company's common stock based on the quoted closing price of the Company's common stock on the date of grant. RSUs typically vest and are settled over approximately a four-year period with 25% of the shares vesting on or around the one-year anniversary of the grant date and the remaining shares vesting quarterly thereafter. Compensation cost for RSUs is amortized on a straight-line basis over the requisite service period. Compensation cost for PSUs is amortized on an accelerated attribution basis over the requisite service period of the award.

The following table summarizes the consolidated stock-based compensation expense by line items in the consolidated statement of operations:

	Year Ended December 31,		
	2019	2018	2017
Research and development	\$ 10,466	\$ 12,807	\$ 6,460
Sales and marketing	1,700	2,795	1,289
General and administrative	5,217	8,990	7,314
Total stock-based compensation expense	<u>\$ 17,383</u>	<u>\$ 24,592</u>	<u>\$ 15,063</u>

The following table summarizes total compensation expense related to unvested awards not yet recognized as of December 31, 2019:

	Unrecognized Compensation Expense for Unvested Awards
Stock options	\$ 11,214
RSUs	19,947
PSUs (1)	7,609
PSOs (1)	99
Total unrecognized compensation expense	<u>\$ 38,869</u>

- (1) The unrecognized compensation expense for PSOs and PSUs vesting in FY2022 and FY2023 is not included in the table above as the Company does not have a reasonable basis upon which to estimate the vesting probability of such awards in those future periods.

The unrecognized compensation expense related to stock options and RSUs will be recognized over a weighted average period of 1.80 years and 1.51 years, respectively. The unrecognized stock compensation expense related to unvested PSUs and PSOs will be recognized over a weighted average period of 0.95 and 0.13 years, respectively.

Stock-based compensation expense in the year ended December 31, 2019, was approximately \$17,383 (comprising approximately \$7,043 related to stock options, \$2,421 related to performance-based awards, \$6,559 related to RSUs and \$1,360 related to the 2007 Purchase Plan).

Stock-based compensation expense in the year ended December 31, 2018, was approximately \$24,592 (comprising approximately \$6,386 related to stock options, \$9,195 related to performance-based awards, \$8,084 related to RSUs and \$927 related to the 2007 Purchase Plan).

Stock-based compensation expense in the year ended December 31, 2017, was approximately \$15,063 (comprising approximately \$3,585 related to stock options, \$790 related to performance-based awards, \$10,127 related to RSUs and \$561 related to the 2007 Purchase Plan).

Cash proceeds, net of taxes, from option exercises were \$3,305, \$5,643 and \$2,564 for the years ended December 31, 2019, 2018 and 2017, respectively. The Company realized no significant income tax benefit from stock option exercises during the year ended December 31, 2019, 2018 and 2017. As permitted by ASC 718, the Company has deferred the recognition of its excess tax benefit from non-qualified stock option exercises.

401(k) Defined Contribution Plan

The Company sponsors a 401(k) defined contribution plan covering certain eligible employees. In 2019, the Company started matching a portion of the contribution made by participants who met certain employment criteria. The matching contributions made by the Company to date were not material. The Company did not match the contributions made by its employees for the years ended December 31, 2018 and 2017, respectively.

NOTE 13 — INCOME TAXES

The components of income (loss) before income taxes by tax jurisdiction were as follows:

	Year Ended December 31,		
	2019	2018	2017
United States	\$ 7,047	\$ (12,396)	\$ (97,503)
Foreign	2,295	(254)	(893)
Income (loss) before income taxes	<u>\$ 9,342</u>	<u>\$ (12,650)</u>	<u>\$ (98,396)</u>

The components of income tax benefit/(provision) were as follows:

	Year Ended December 31,		
	2019	2018	2017
Current:			
Federal	\$ 373	\$ (96)	\$ 947
State	(10)	(8)	(10)
Foreign	(590)	(500)	(521)
	<u>(227)</u>	<u>(604)</u>	<u>416</u>
Deferred:			
Federal	—	—	294
Foreign	(244)	55	116
	<u>(244)</u>	<u>55</u>	<u>410</u>
Total:			
Federal	373	(96)	1,241
State	(10)	(8)	(10)
Foreign	(834)	(445)	(405)
	<u>\$ (471)</u>	<u>\$ (549)</u>	<u>\$ 826</u>

The difference between the actual rate and the federal statutory rate was as follows:

	Year Ended December 31,		
	2019	2018	2017
Tax at federal statutory rate	21.0%	21.0%	34.0%
Meals and entertainment	3.1	(2.0)	(0.1)
Research and development credit	(41.0)	21.3	2.5
Stock-based compensation	(29.0)	17.9	(2.0)
Revenue from contracts with customers	—	(14.6)	—
Others	(0.6)	(3.1)	0.6
Global intangible low-taxed income	4.2	(1.7)	—
Valuation allowance	17.5	(35.3)	(33.8)
Executive compensation	6.1	—	—
Foreign tax credit	23.7	(7.8)	(0.4)
Effective tax rate	<u>5.0%</u>	<u>(4.3)%</u>	<u>0.8%</u>

Deferred tax assets and liabilities consist of the following:

	December 31, 2019			December 31, 2018		
	US	Foreign	Total	US	Foreign	Total
Deferred tax assets:						
Fixed assets	\$ 209	\$ 71	\$ 280	\$ —	\$ 35	\$ 35
Net operating loss carryforwards	48,968	25	48,993	50,119	97	50,216
Accruals, reserves and other	5,202	134	5,336	10,853	172	11,025
Foreign tax credit	2,905	—	2,905	5,118	128	5,246
Stock-based compensation	5,882	—	5,882	4,787	—	4,787
Research and development credit	22,630	—	22,630	17,945	—	17,945
Capitalized research and development	7,189	—	7,189	2,835	—	2,835
Intangible assets	355	—	355	—	—	—
Other	2,951	—	2,951	2,888	—	2,888
Total deferred tax assets	<u>\$ 96,291</u>	<u>\$ 230</u>	<u>\$ 96,521</u>	<u>\$ 94,545</u>	<u>\$ 432</u>	<u>\$ 94,977</u>
Deferred tax liabilities:						
Fixed assets	\$ —	\$ (40)	\$ (40)	\$ (54)	\$ (19)	\$ (73)
Intangible assets	—	—	—	(513)	—	(513)
Net deferred tax assets	<u>96,291</u>	<u>190</u>	<u>96,481</u>	<u>93,978</u>	<u>413</u>	<u>94,391</u>
Less valuation allowance	<u>(96,291)</u>	<u>(25)</u>	<u>(96,316)</u>	<u>(93,978)</u>	<u>(4)</u>	<u>(93,982)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ 165</u>	<u>\$ 165</u>	<u>\$ —</u>	<u>\$ 409</u>	<u>\$ 409</u>

The Company has not provided deferred taxes on unremitted earnings attributable to foreign subsidiaries, because their earnings are intended to be reinvested indefinitely. No deferred tax asset was recognized, except for India and Canada, since the Company does not believe the deferred tax asset will be realized in the foreseeable future. The amount of accumulated foreign earnings of the Company's foreign subsidiaries totaled \$2,953 as of December 31, 2019. If the Company's foreign earnings were repatriated, additional tax expense might result. The Company determined that the calculation of the amount of unrecognized deferred tax liability related to these cumulative unremitted earnings attributable to foreign subsidiaries is not practicable.

The Company recorded a release of its valuation allowance of \$0, \$0, and \$294 during 2019, 2018, and 2017, respectively. The 2017 release was associated with the acquisitions of Dairy Free in August 2017. Pursuant to ASC 805-740, changes in the Company's valuation allowance that stem from a business combination should be recognized as an element of the Company's deferred income tax expense or benefit. The Company previously recognized a valuation allowance against its net operating loss carryforwards and determined that it should be able to utilize the benefit of those net operating losses against the deferred tax liabilities of Dairy Free; therefore, it has partially released its pre-existing valuation allowance.

In accordance with ASC 740 and based on all available evidence on a jurisdictional basis, the Company believes that it is more likely than not that its deferred tax assets will not be utilized and has recorded a full valuation allowance against its net deferred tax assets in each of its jurisdictions except for entities in Canada and India. The Company assesses on a periodic basis the likelihood that it will be able to recover its deferred tax assets. The Company considers all available evidence, both positive and negative, including historical levels of income or losses, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance. If it is not more likely than not that the Company expects to recover its deferred tax assets, the Company will increase its provision for taxes by recording a valuation allowance against the deferred tax assets that it estimates will not ultimately be recoverable. The available negative evidence at December 31, 2019 and 2018 included historical and projected future operating losses. As a result, the Company concluded that an additional valuation allowance of \$2,334 and \$4,471 was required to reflect the change in its deferred tax assets prior to valuation allowance during 2019 and 2018, respectively. As of December 31, 2019 and 2018, the Company considered it more likely than not that its deferred tax assets would not be realized within their respective carryforward periods.

At December 31, 2019, the Company had net operating loss carryforwards of approximately \$211,330 and \$91,722 for federal and state tax purposes, respectively. If not utilized, these carryforwards will expire at various times between 2023 and 2037. In addition, the Company has research and development tax credit carryforwards of approximately \$14,327 for federal income tax purposes and \$23,406 for California tax purposes. If not utilized, the federal research and development tax credit carryforwards will begin to expire in 2023. The California state research credit will carry forward indefinitely. The Company has approximately \$2,895 of foreign tax credits that will begin to expire in 2020. The Company's ability to use its net operating loss carryforwards and federal and state tax credit carryforwards to offset future taxable income and future taxes, respectively, may be subject to restrictions attributable to equity transactions that result in changes in ownership as defined by Internal Revenue Code Section 382.

A reconciliation of the total amounts of unrecognized tax benefits was as follows:

	Year Ended December 31,	
	2019	2018
Beginning balance	\$ 20,718	\$ 13,391
Reductions of tax positions taken during previous years	(8,226)	(59)
Additions based on uncertain tax positions related to the current period	2,598	3,996
Additions based on uncertain tax positions related to prior periods	—	3,400
Cumulative translation adjustment	(6)	(10)
Ending balance	<u>\$ 15,084</u>	<u>\$ 20,718</u>

The total unrecognized tax benefits as of December 31, 2019 and 2018 included approximately \$15,084 and \$20,548, respectively, of unrecognized tax benefits that have been netted against deferred tax assets. As of December 31, 2019, the Company does not expect the unrecognized tax benefits, if recognized, to have a material impact on its financial statements.

The Company's policy is to recognize interest and penalties related to unrecognized tax benefits in income tax expense. The Company has accrued \$0 of interest and penalties on uncertain tax positions as of December 31, 2019, as compared to \$150 as of December 31, 2018. Approximately \$23, \$27, and \$96 of accrued interest and penalty expense related to estimated obligations for unrecognized tax benefits was recognized during 2019, 2018 and 2017, respectively.

The Company is subject to taxation in the United States and various foreign jurisdictions. The material jurisdictions subject to examination by tax authorities are primarily the State of California, the United States, Canada and India. The Company's federal tax returns are open by statute for tax years 1998 and California tax returns are open by statute for tax years 2003 and forward and could be subject to examination by the tax authorities.

The Tax Cuts and Jobs Act ("The Act") enacted on December 22, 2017 subjects a U.S. shareholder to tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense. The Company has elected to account for GILTI as a period cost in the year the tax is incurred.

Prior to the enactment of The Act, the Company had asserted indefinite reinvestment on all of its undistributed earnings from foreign subsidiaries. As a result of the enactment of The Act, the Company has reevaluated its historic assertion and continue to assert these earnings to be indefinitely reinvested.

Based on its review of The Act, the Company expects that this legislation will not have a material impact on its future operational results as long as the Company maintains a full valuation allowance. It is the Company's policy to record valuation allowances when necessary to reduce deferred tax assets to the amount that it expects to realize. Currently, the Company maintains a full valuation allowance for its deferred tax assets in the U.S. and Hong Kong.

NOTE 14 — SEGMENT INFORMATION AND OPERATIONS BY GEOGRAPHIC AREA

ASC 280, *Segment Reporting* ("ASC 280"), establishes standards for reporting information about operating segments. It defines operating segments as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's Chief Executive Officer, who is also chief operating decision maker, makes decisions and manages the Company's operations as one operating segment. The financial information reviewed by him is included within one operating segment for purposes of allocating resources and evaluating financial performance.

The following tables set forth revenue and long-lived assets based on geography:

Revenue

Revenue by geography is primarily based on the geographic location of the Company's payers. International revenue is revenue generated from distributors and advertising service providers whose principal operations are located outside the United States or, in the case of the Digital Storefronts, the revenue generated from end-user purchases made outside of the United States.

	Year Ended December 31,		
	2019	2018	2017
United States of America	\$ 320,343	\$ 280,264	\$ 216,468
Americas, excluding the United States	25,240	21,903	15,976
EMEA	45,700	41,585	33,180
APAC	20,098	22,809	21,203
Total revenue	<u>\$ 411,381</u>	<u>\$ 366,561</u>	<u>\$ 286,827</u>

Long-Lived Assets

The Company attributes its long-lived assets, which primarily consist of property and equipment, to a country primarily based on the physical location of the assets. Property and equipment, net of accumulated depreciation and amortization, summarized by geographic location was as follows:

	December 31,	
	2019	2018
United States of America	\$ 16,738	\$ 12,653
Rest of the World	905	1,235
Total	<u>\$ 17,643</u>	<u>\$ 13,888</u>

NOTE 15 — RESTRUCTURING

During the year ended December 31, 2017, the Company recorded \$6,019 of restructuring charge related to employee and lease termination costs in the Company's Bellevue, Washington; Long Beach, California; San Francisco, California; Portland, Oregon; and Beijing, China offices. During the year ended December 31, 2018, the Company recorded \$240 of restructuring charges related to employee and lease termination costs in the Company's Long Beach, California office. No restructuring charges related to employee and lease termination costs were recorded during the year ended December 31, 2019.

	Restructuring Workforce	Restructuring Facility	Restructuring Total
Balance as of December 31, 2016	\$ -	\$ 271	\$ 271
Charges to operations	4,319	1,700	6,019
Non-cash charges/adjustments	146	44	190
Charges settled in cash	(4,322)	(1,399)	(5,721)
Balance as of December 31, 2017	<u>\$ 143</u>	<u>\$ 616</u>	<u>\$ 759</u>
Charges to operations	160	80	240
Charges settled in cash	(303)	(402)	(705)
Balance as of December 31, 2018	<u>\$ -</u>	<u>\$ 294</u>	<u>\$ 294</u>
Non-cash adjustments (1)	-	(294)	(294)
Balance as of December 31, 2019	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

(1) Reflects reclassification of restructuring accrual to operating lease right of use assets.

NOTE 16 – QUARTERLY FINANCIAL DATA (unaudited)

The following table sets forth unaudited quarterly consolidated statements of operations data for 2019 and 2018. The Company derived this information from its unaudited consolidated financial statements, which it prepared on the same basis as its audited consolidated financial statements contained in this report. These unaudited statements include all adjustments, consisting only of normal recurring adjustments that the Company considers necessary for a fair statement of that information for the periods presented.

	For the Three Months Ended							
	2019				2018			
	March 31,	June 30,	September 30,	December 31,	March 31,	June 30,	September 30,	December 31,
Revenue	\$ 95,885	\$ 95,540	\$ 107,077	\$ 112,879	\$ 81,443	\$ 90,193	\$ 99,285	\$ 95,640
Cost of revenue:								
Platform commissions, royalties and other	32,813	32,806	36,758	38,278	29,167	32,386	34,384	32,508
Impairment of prepaid royalties and minimum guarantees	457 (b)	—	—	—	99 (b)	—	—	612
Impairment and amortization of intangible assets	1,252	1,056	1,040	1,039	1,467	1,468	4,167	2,017
Total cost of revenue	34,522	33,862	37,798	39,317	30,733	33,854	38,551	35,137
Gross profit	61,363	61,678	69,279	73,562	50,710	56,339	60,734	60,503
Operating expenses:								
Research and development	26,546	19,736	22,968	25,877	22,710	22,832	23,839	25,553
Sales and marketing	28,105	35,040	46,140	31,013	26,810	29,741	28,874	28,435
General and administrative	6,635	4,951	5,879	5,751	7,890	7,608	8,095	8,074
Restructuring charge	—	—	—	—	80 (a)	—	160 (a)	—
Total operating expenses	61,286	59,727	74,987	62,641	57,490	60,181	60,968	62,062
Income/(loss) from operations	77	1,951	(5,708)	10,921	(6,780)	(3,842)	(234)	(1,559)
Interest and other income/(expense), net	764	556	271	510	(251)	(366)	96	286
Income/(loss) before income taxes	841	2,507	(5,437)	11,431	(7,031)	(4,208)	(138)	(1,273)
Income tax (provision)/benefit	(178)	—	348	(641)	(175)	(207)	(118)	(49)
Net income/(loss)	\$ 663	\$ 2,507	\$ (5,089)	\$ 10,790	\$ (7,206)	\$ (4,415)	\$ (256)	\$ (1,322)
Net income/(loss) per share								
Basic	\$ 0.00	\$ 0.02	\$ (0.03)	\$ 0.07	\$ (0.05)	\$ (0.03)	\$ (0.00)	\$ (0.01)
Diluted	\$ 0.00	\$ 0.02	\$ (0.03)	\$ 0.07	\$ (0.05)	\$ (0.03)	\$ (0.00)	\$ (0.01)

(a) Includes restructuring charges relating to employee termination costs in the Company's Long Beach office.

(b) These charges are related to impairment of prepaid guaranteed royalties for certain celebrity license agreements, and certain other prepaid royalties.

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

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Exchange Act. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2019, our disclosure controls and procedures are designed to provide reasonable assurance and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). 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 as of December 31, 2019 based on the guidelines established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the results of this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2019 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles.

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report appearing on page 64.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2020 Annual Meeting of Stockholders. For information with respect to our executive officers, see “Executive Officers” at the end of Part I, Item 1 of this report.

We maintain a Code of Business Conduct and Ethics that applies to all employees, officers and directors. Our Code of Business Conduct and Ethics is published on our website at www.glu.com/investors. We disclose on our website amendments to certain provisions of our Code of Business Conduct and Ethics, or waivers of such provisions granted to executive officers and directors.

Item 11. *Executive Compensation*

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2020 Annual Meeting of Stockholders.

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

The information set forth in the section titled “Security Ownership of Certain Beneficial Owners and Management” contained in our Proxy Statement to be filed for our 2020 Annual Meeting of Stockholders is incorporated herein by reference.

Equity Compensation Plan Information

The following table sets forth certain information, as of December 31, 2019, concerning securities authorized for issuance under all of our equity compensation plans: our 2007 Equity Incentive Plan (the “2007 Plan”), 2007 Employee Stock Purchase Plan (the “ESPP”), 2008 Equity Inducement Plan (the “2008 Inducement Plan”), and 2018 Equity Inducement Plan (the “2018 Inducement Plan”).

	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (1)	Number of Securities Remaining Available for Future Issuance Under (Excluding Securities Reflected in Column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	28,916,074	\$ 4.00	5,473,466(2)
Equity compensation plans not approved by security holders	3,321,904(3)	\$ 2.77	156,108(4)
Total	32,237,978		5,629,574

- (1) The weighted average exercise price does not take into account the shares subject to outstanding RSUs and PSUs, which have no exercise price.
- (2) Represents 2,686,329 shares available for issuance under the 2007 Plan, which plan permits the grant of incentive and non-qualified stock options (including PSOs), stock appreciation rights, restricted stock, stock awards and RSUs; and 2,787,137 shares available for issuance under the ESPP.
- (3) Represents outstanding options and RSUs under the 2008 Inducement Plan and 2018 Inducement Plan.
- (4) Represents shares available for issuance under the 2018 Inducement Plan, under which we may only grant non-qualified stock options and RSUs.

The Compensation Committee of our Board of Directors adopted the 2008 Inducement Plan in March 2008 to augment the shares available under our 2007 Plan, and in April 2018, the Compensation Committee adopted the 2018 Inducement Plan to replace the 2008 Inducement Plan which expired by its terms in March 2018. We have not sought stockholder approval for either the 2008 Inducement Plan or the 2018 Inducement Plan. As such, awards under these plans have been granted in accordance with Nasdaq Listing Rule 5635(c)(4) and only to persons not previously an employee or director, or following a bona fide period of non-employment, as an inducement material to such individuals entering into employment with us. As of December 31, 2019, we had reserved a total of 400,000 shares under the 2018 Inducement Plan, of which 240,913 shares were subject to outstanding stock options and RSUs, 156,108 shares remained available for issuance, and 2,979 shares had been exercised. In addition, as of December 31, 2019, 3,080,991 shares issued from our 2008 Inducement Plan remained subject to outstanding stock options and RSUs.

We may grant non-qualified stock options under the 2018 Inducement Plan at prices less than 100% of the fair value of the shares on the date of grant, at the discretion of our Board of Directors. The fair value of our common stock is determined by the last sale price of our stock on The Nasdaq Global Select Market on the date of determination. If any option or RSU granted under the 2018 Inducement Plan expires or terminates for any reason without being exercised in full, are used to satisfy tax withholding obligations with respect to the award, or otherwise terminate without the underlying shares being issued, such unexercised, tax-settled, or otherwise terminated shares will be available for grant under the 2018 Inducement Plan. All outstanding awards are subject to adjustment for any future stock dividends, splits, combinations, or other changes in capitalization as described in the 2018 Inducement Plan. If we were acquired and the acquiring corporation did not assume or replace the awards granted under the 2018 Inducement Plan, or if we were to liquidate or dissolve, all outstanding awards will expire on such terms as our Board of Directors determines.

For more information regarding the 2018 Inducement Plan, see Note 12 of Notes to Consolidated Financial Statements in Item 8 of this report.

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

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2020 Annual Meeting of Stockholders.

Item 14. *Principal Accounting Fees and Services.*

The information required for this Item is incorporated by reference from our Proxy Statement to be filed for our 2020 Annual Meeting of Stockholders.

PART IV

Item 15. *Exhibits, Financial Statement Schedules*

(a)(1) Financial Statements: The financial statements filed as part of this report are listed on the index to financial statements on page 62.

(2) Financial Schedules: All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included.

(b) Exhibits. The exhibits listed on the Exhibit Index are included, or incorporated by reference, in this report.

Item 16. *Form 10-K Summary*

None.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
2.01	Stock Transfer Agreement by and among Glu Mobile Inc., Time Warner Inc., Intel Capital Corporation and certain other stockholders of Crowdstar Inc., dated November 2, 2016.	8-K	001-33308	2.01	11/03/16	
3.01	Restated Certificate of Incorporation of Glu Mobile Inc.	S-1/A	333-139493	3.02	02/14/07	
3.02	Amended and Restated Bylaws of Glu Mobile Inc., adopted on March 7, 2014.	8-K	001-33368	99.01	03/13/14	
4.01	Form of Registrant's Common Stock Certificate.	S-1/A	333-139493	4.01	02/14/07	
4.02	Description of the Company's Common Stock Registered Under Section 12 of the Securities Exchange Act of 1934, as amended.					X
10.01#	Form of Indemnity Agreement entered into between Glu Mobile Inc. and each of its directors and executive officers, effective as of October 24, 2013.	8-K	001-33368	99.01	10/29/13	
10.02(A)#	Amended & Restated 2007 Equity Incentive Plan, as amended and restated through June 6, 2019.	10-Q	001-33368	10.01	08/08/19	
10.02(B)#	For the 2007 Equity Incentive Plan, forms of (a) Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement, (b) Notice of Restricted Stock Award and Restricted Stock Agreement, (c) Notice of Stock Appreciation Right Award and Stock Appreciation Right Award Agreement and (d) Notice of Stock Bonus Award and Stock Bonus Agreement.	S-1/A	333-139493	10.03	02/16/07	
10.02(C)#	For the 2007 Equity Incentive Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement.	10-Q	001-33368	10.08	08/09/13	
10.02(D)#	For the 2007 Equity Incentive Plan, forms of (a) Notice of Performance Stock Option Grant Agreement (One Year Vesting Term), (b) Notice of Performance Stock Option Grant Agreement (Three Year Vesting Term), and (c) Notice of Performance Restricted Stock Unit Award Agreement.	10-K	001-33368	10.02(D)	03/09/18	
10.03#	2007 Employee Stock Purchase Plan, as amended and restated through June 8, 2017.	10-Q	001-33368	10.01	08/07/17	
10.04(A)#	2008 Equity Inducement Plan, as amended effective November 14, 2016.	8-K	001-33368	99.01	11/18/16	
10.04(B)#	For the 2008 Equity Inducement Plan, forms of Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement.	10-K	001-33368	10.05	03/21/10	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.04(C)#	For the 2008 Equity Inducement Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Award Agreement.	10-K	001-33368	10.05(C)	03/14/14	
10.05(A)#	2018 Equity Inducement Plan	10-Q	001-33368	10.02	08/08/18	
10.05(B)#	For the 2018 Equity Inducement Plan, forms of Notice of Stock Option Grant, Stock Option Award Agreement and Stock Option Exercise Agreement.	10-Q	001-33368	10.03	08/08/18	
10.05(C)#	For the 2018 Equity Inducement Plan, form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Award Agreement.	10-Q	001-33368	10.04	08/08/18	
10.06#	Forms of Stock Option Award Agreement (Immediately Exercisable) and Stock Option Exercise Agreement (Immediately Exercisable) under the Glu Mobile Inc. 2007 Equity Incentive Plan.	10-Q	001-33368	10.05	08/14/08	
10.07#	Summary of Compensation Terms of Nick Earl.	8-K	001-33368		10/29/2018	
10.08#	Executive Employment Agreement, effective as of November 10, 2016, by and between Glu Mobile Inc. and Nick Earl.	10-K	001-33368	10.08	03/10/17	
10.09#	Change of Control Severance Agreement between Glu Mobile Inc. and Nick Earl, effective as of November 10, 2016.	10-K	001-33368	10.09	03/10/17	
10.10#	Summary of Change of Control Severance Agreement between Glu Mobile Inc. and Nick Earl, dated as of February 8, 2016.	10-K	001-33368	10.20	03/04/16	
10.11#	Summary of Compensation Terms of Eric R. Ludwig.	8-K	001-33368		10/29/2018	
10.12#	Change of Control Severance Agreement, dated as of October 10, 2008, between Glu Mobile Inc. and Eric R. Ludwig.	10-K	001-33368	10.09	03/13/09	
10.13#	Amendment, dated as of July 7, 2011, to Change of Control and Severance Agreement between Glu Mobile Inc. and Eric R. Ludwig, dated as of October 10, 2008.	10-Q	001-33368	10.02	11/14/11	
10.14#	Summary of Compensation Terms of Chris Akhavan.	8-K	001-33368		10/29/2018	
10.15#	Change of Control Severance Agreement between Glu Mobile Inc. and Chris Akhavan, dated as of April 22, 2013.	10-Q	001-33368	10.02	08/09/13	
10.16#	Summary of Compensation Terms of Scott J. Leichtner.	10-K	001-33368	10.17	02/28/19	
10.17#	Summary of Change of Control Severance Arrangement between Glu Mobile Inc. and Scott J. Leichtner, dated as of July 7, 2011.	10-K	001-33368	10.15	03/15/13	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.18#	Summary of Compensation Terms of Becky Ann Hughes.					X
10.19#	2020 Executive Cash Bonus Plan	8-K	001-33368		12/20/2019	
10.20#	Non-Employee Director Compensation Program, effective as of October 25, 2018					X
10.21(A)	Lease, dated as of May 9, 2017 between Howard Street Associates LLC and Glu Mobile Inc.	8-K	001-33368	99.01	05/15/17	
10.21(B)	First Amendment to Standard Office Lease between Howard Street Associates LLC and Glu Mobile Inc.					X
10.21(C)	Second Amendment to Standard Office Lease between Howard Street Associates LLC and Glu Mobile Inc.	10-Q	001-33368	10.02	08/08/19	
10.22	iOS Developer Program License Agreement between Glu Games Inc. and Apple Inc., as amended to date.	10-K	001-33368	10.27	03/15/13	
10.23	Android Market Developer Distribution Agreement between Glu Games Inc. and Google Inc., as amended to date.	10-K	001-33368	10.28	03/15/13	
10.24+	License Agreement, dated as of March 31, 2012, by and between Glu Mobile Inc. and Atari, Inc.	10-Q/A	001-33368	10.01	10/12/12	
10.25+	Trademark and Domain Name Assignment and License Agreement, dated as of March 31, 2012, by and between Glu Mobile Inc. and Atari Inc.	10-Q	001-33368	10.02	08/09/12	
10.26(A)+	Unity Technologies Software License Agreement between Glu Mobile Inc. and Unity Technologies ApS, dated as of October 29, 2017.	10-K	001-33368	10.27	03/09/2018	
10.26(B)++	Amendment No. 1 to the Unity Technologies Software License Agreement between Glu Mobile Inc. and Unity Technologies ApS, dated as of October 16, 2019.					X
21.01	List of Subsidiaries of Glu Mobile Inc.					X
23.01	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.					X
24.01	Power of Attorney (see the Signature Page to this report).					
31.01	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rule 13a-14(a).					X
31.02	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rule 13a-14(a).					X

Exhibit Number	Exhibit Description	Incorporated by Reference			Filing Date	Filed Herewith
		Form	File No.	Exhibit		
32.01	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350 and Securities Exchange Act Rule 13a-14(a)/15d-14(a).*					X
32.02	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 and Securities Exchange Act Rule 13a-14(a)/15d-14(a). *					X
101.INS	Inline XBRL Report Instance Document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Label Linkbase Document					X
101.PRE	Inline XBRL Presentation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
104	Cover Page Interactive Data File (embedded within the Inline XBRL document and included in Exhibit 101).					

Indicates a management compensatory plan or arrangement.

+ Certain portions of this exhibit have been omitted and have been filed separately with the SEC pursuant to an order granting confidential treatment issued by the SEC under Rule 24b-2 as promulgated under the Exchange Act.

++ Certain portions of this exhibit have been omitted as permitted under Item 601(b)(10) of Regulation S-K.

* This certification is not deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Act of 1934, except to the extent that Glu Mobile Inc. specifically incorporates it by reference.

SIGNATURES

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

GLU MOBILE INC.

Date: February 28, 2020

By: /s/ Nick Earl

Nick Earl, President and Chief Executive
Officer

Date: February 28, 2020

By: /s/ Eric R. Ludwig

Eric R. Ludwig, Executive Vice President, Chief
Operating Officer and Chief Financial Officer

POWER OF ATTORNEY

By signing this Annual Report on Form 10-K below, I hereby appoint each of Nick Earl, Eric R. Ludwig and Scott J. Leichtner as my attorney-in-fact to sign all amendments to this Form 10-K on my behalf, and to file this Form 10-K (including all exhibits and other documents related to the Form 10-K) with the Securities and Exchange Commission. I authorize each of my attorneys-in-fact to (1) appoint a substitute attorney-in-fact for himself and (2) perform any actions that he believes are necessary or appropriate to carry out the intention and purpose of this Power of Attorney. I ratify and confirm all lawful actions taken directly or indirectly by my attorneys-in-fact and by any properly appointed substitute attorneys-in-fact.

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

Signature	Title	Date
_____ /s/ Nick Earl Nick Earl	President, Chief Executive Officer and Director (Principal Executive Officer)	February 28, 2020
_____ /s/ Eric R. Ludwig Eric R. Ludwig	EVP, Chief Operating Officer and Chief Financial Officer (Principal Financial Officer)	February 28, 2020
_____ /s/ Puneet Kedia Puneet Kedia	Vice President of Accounting (Principal Accounting Officer)	February 28, 2020
_____ /s/ Niccolo de Masi Niccolo de Masi	Executive Chairman	February 28, 2020
_____ Benjamin T. Smith IV	Lead Director	
_____ /s/ Darla Anderson Darla Anderson	Director	February 28, 2020
_____ /s/ Eric R. Ball Eric R. Ball	Director	February 28, 2020
_____ /s/ Greg Brandeau Greg Brandeau	Director	February 28, 2020
_____ /s/ Ben Feder Ben Feder	Director	February 28, 2020
_____ /s/ Ann Mather Ann Mather	Director	February 28, 2020
_____ /s/ Hany M. Nada Hany M. Nada	Director	February 28, 2020
_____ /s/ Gabrielle Toledano Gabrielle Toledano	Director	February 28, 2020

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Forward-Looking Statements:

These proxy materials contain forward-looking statements regarding future events and our future results, which are subject to the safe harbors created under the Securities Act of 1933 and the Securities Exchange Act of 1934, each as amended. These statements are based on current expectations, estimates, forecasts, and projections about our business and the industries in which we operate and our management's beliefs and assumptions. Words such as "expects," "anticipates," "targets," "trend," "goals," "projects," "intends," "plans," "believes," "seeks," "estimates," "continues," "strategy," "may," variations of such words, and similar expressions identify such forward-looking statements. In addition, the following statements, among others, in the Letter to Stockholders included in these proxy materials are forward-looking statements: our optimism that with the key changes we made in 2019, including a reorganization of our Revenue Team, a new approach to giving guidance on new title launches, and a series of process improvements across our Studio and Central infrastructure, we are positioned for more significant growth in the future; our belief that these changes combined with our solid foundation and proven Growth Games are already strengthening our position in 2020 and beyond; our belief that our Growth Games will provide predictable, repeatable revenue and margin contribution, and allow us to invest in expanding our portfolio with the addition of new Growth Games that stack on the existing titles creating the potential for a strong aggregated growth curve for the company; our belief that *Design Home* will grow and our intention to build the infrastructure to bring this game to other platforms such as the web browser, to look at e-commerce opportunities, to expand our growth in Europe, and to add exciting features to continue to strengthen engagement and expand monetization; our optimism about the future for *Covet Fashion* and our intention to expand the social connection between our players; our belief that *Diner Dash Adventures* will have a long life and will become another of our Growth Games; our intention to potentially acquire games or teams; our belief that *Covet Fashion* and *Design Home* will ensure greater attention to quality of the experiences along with significant value in the marketplace for Glu and our stockholders; our belief that our Growth Games can provide predictable, repeatable and growing revenue streams that allow us to better plan our roadmap and to meet the needs of our business as well as to provide us with a solid foundation and put us in a strong position to both build new games and acquire new titles, studios and talent; and our optimism that *Disney Sorcerer's Arena* and our upcoming *Deer Hunter World* titles can become Growth Games and create even greater growth and deeper engagement with our players in the years ahead.

Investors should consider important risk factors, which include: the risk that consumer demand for smartphones, tablets and next-generation platforms does not grow as significantly as we anticipate or that we will be unable to capitalize on any such growth; the risk that we do not realize a sufficient return on our investment with respect to our efforts to develop free-to-play games for smartphones, tablets and next-generation platforms; the risk that we are unable to recruit and retain key personnel; the risk that our development expenses for games for smartphones, tablets and next-generation platforms are greater than we anticipate; the risk that our newly released games will be of a quality less than desired by reviewers and consumers and do not become Growth Games; the risk that the mobile games market, particularly with respect to freemium gaming, is smaller than anticipated; risk related to potential impacts of the COVID-19 pandemic; and the other risks detailed under the caption "Risk Factors" in our 2019 Annual Report on Form 10-K included with these proxy materials and our other SEC filings. We are under no obligation, and expressly disclaim any obligation, to update or alter our forward-looking statements, except as may be required by law.

BOARD OF DIRECTORS

Niccolo M. de Masi⁴

Chief Executive Officer and Director, dMY Technology Group, Inc.
Chairman, Glu Mobile Inc.

Darla Anderson⁴

Movie Producer

Eric R. Ball¹

General Partner, Impact Venture Capital

Greg Brandeau^{2, 3}

Managing Partner, Paradox Strategies

Nick Earl⁴

President and Chief Executive Officer, Glu Mobile Inc.

Ben Feder⁴

President, International Partnerships (North America), Tencent Holdings Limited

Ann Mather³

Independent Director of and Advisor to Technology and Media Companies

Hany M. Nada^{1, 2, 4}

Co-Founder and Managing Partner, ACME Capital

Benjamin T. Smith, IV^{1, 2, 3, 4}

Senior Partner, A.T. Kearney

Gabrielle Toledano²

Chief Operating Officer, Keystone Strategy

EXECUTIVE OFFICERS

Nick Earl⁴

President and Chief Executive Officer

Eric R. Ludwig

Executive Vice President, Chief Operating Officer and Chief Financial Officer

Chris Akhavan

Senior Vice President, Business & Corporate Development

Becky Ann Hughes

Senior Vice President, Revenue

Scott J. Leichtner

Vice President, General Counsel and Corporate Secretary

CORPORATE HEADQUARTERS

875 Howard Street, Suite 100
San Francisco, California 94103

TRANSFER AGENT AND REGISTRAR

For questions regarding misplaced stock certificates, changes of address or the consolidation of accounts, please contact our transfer agent:

American Stock Transfer & Trust Company

6201 15th Avenue
Brooklyn, NY 11219
Tel: 800.937.5449
Fax: 800.921.8124

LEGAL COUNSEL

Fenwick & West LLP
Mountain View, California

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

PricewaterhouseCoopers LLP
San Francisco, California

¹ Member of the Audit Committee

² Member of the Compensation Committee

³ Member of the Nominating & Governance Committee

⁴ Member of the Strategy Committee

