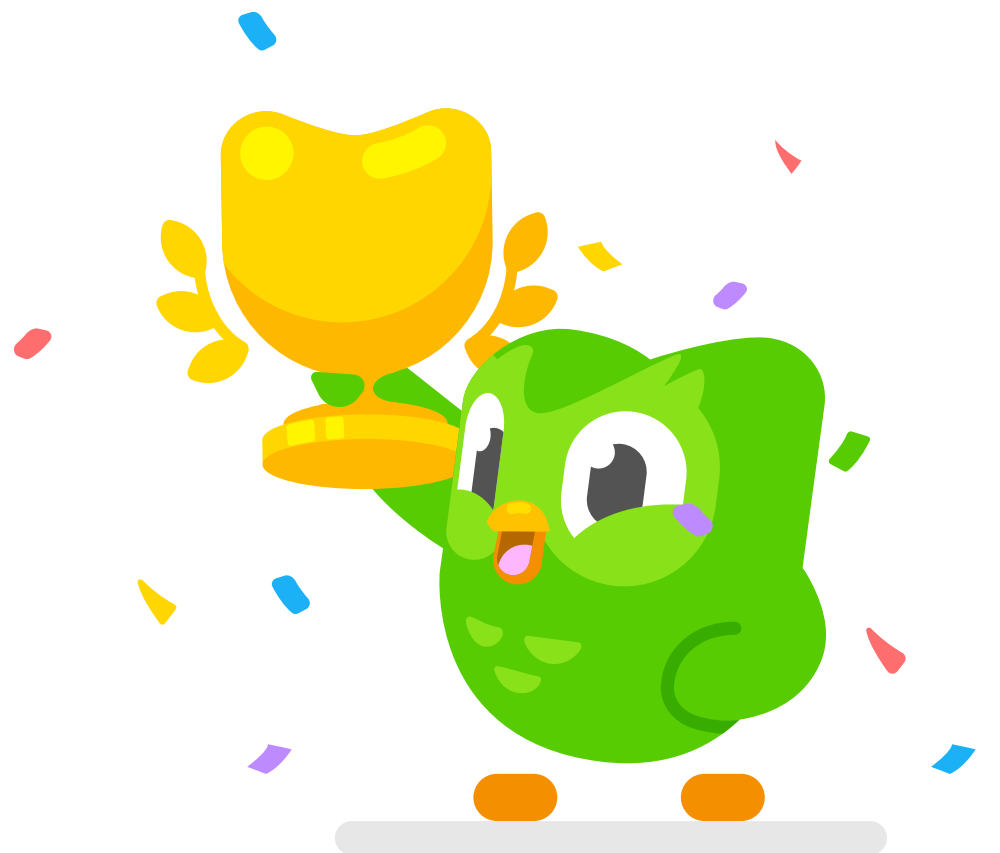


shareholder letter

Q4 / FY2021

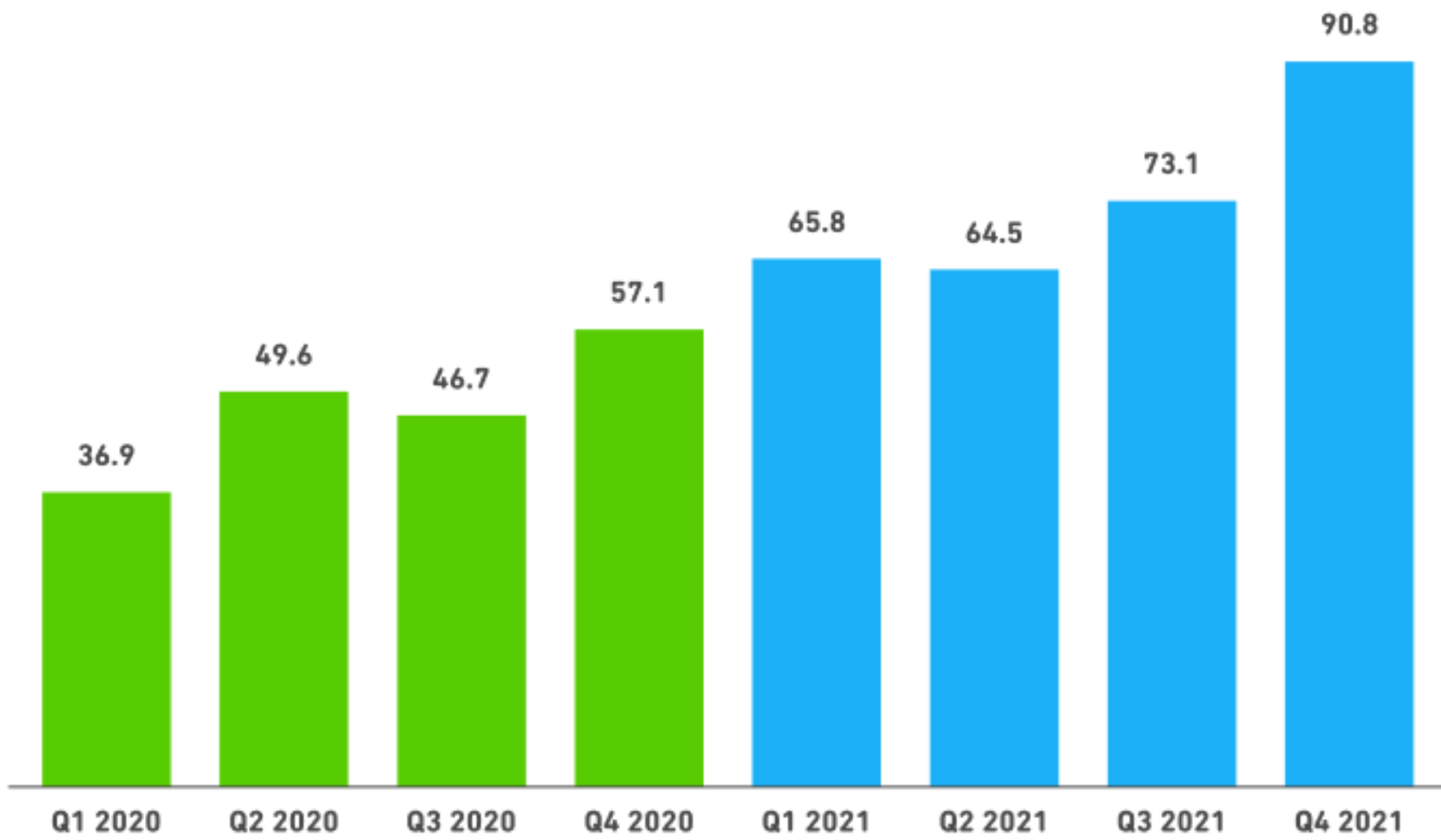
our mission is
to develop the
best education
in the world
and make it
universally
available.



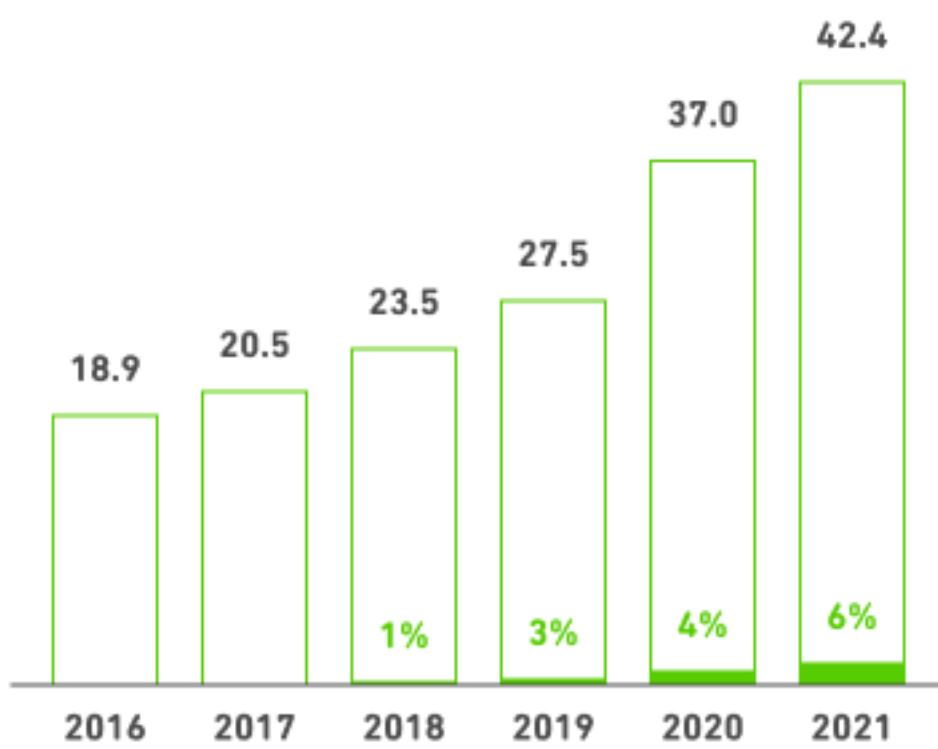
Q4 and FY21 highlights

	Q4 2021	FY 2021
Daily Active Users	10.1M +20% YoY	9.6M +18% YoY
Monthly Active Users	42.4M +15% YoY	40.5M +10% YoY
Paid Subscribers	2.5M +56% YoY	2.5M +56 YoY
Revenue	\$73.0M +51% YoY	\$250.8M +55% YoY
Total Bookings	\$90.8M +59% YoY	\$294.2M +55% YoY
Net Loss	\$(17.5)M	\$(60.1)M
Adjusted EBITDA	\$0.3M	\$(1.1)M

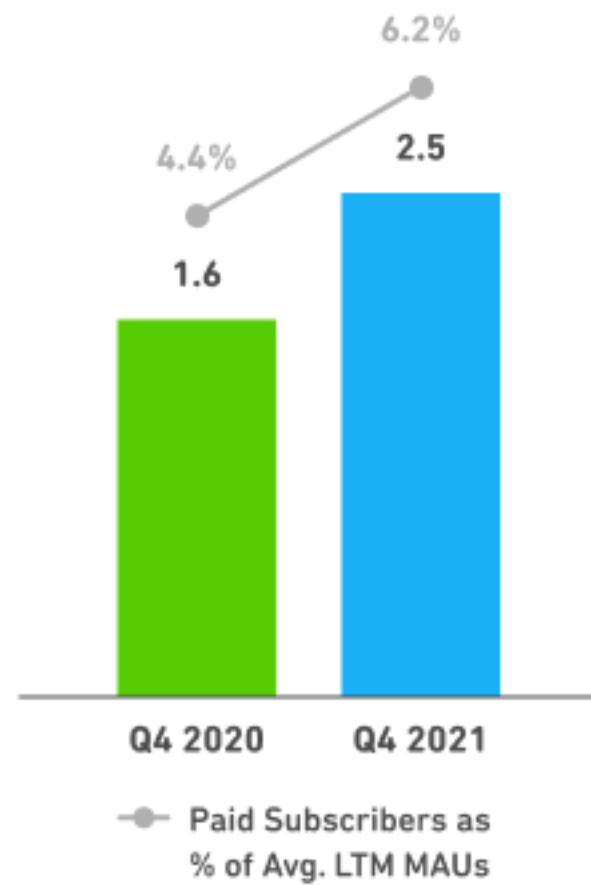
Total Bookings (\$M)



Total MAU (M*) and Paid Subscribers as % of MAU*



Paid Subscribers (M) & Penetration of MAUs (%)



* Q4 Average

Dear shareholders,

When Duolingo went public, I said that I planned to dedicate my life to building a future in which, through technology, every person on this planet has access to the best quality of education. And not only that, but a future in which people want to spend their time learning. I'm proud to say that this year we made significant progress towards this vision. Our language learners spent close to a billion hours on our app, and we showed that they can learn the equivalent of five university semesters of language education in half the time. This is nothing short of remarkable.

We had a number of significant achievements in 2021:

- We went public and shared our story in our own, uniquely Duolingo way;
- We saw strong user growth across all regions, especially Asia, and ended the year with record-breaking DAUs and MAUs (successfully lapping COVID lockdowns);
- We rapidly grew paid subscribers, adding nearly one million new ones;
- We launched our Family Plan subscription package, which allows up to six members to enjoy the premium benefits of Duolingo Plus, and which we believe will help us further grow paid subscribers and retain them better;
- We made the Duolingo app more engaging by adding social features, further rolling out our cast of characters, and adding even more delightful animations;
- We continued securing our place in popular culture as a shorthand for language learning with millions of engagements across all social media channels, especially TikTok;
- We expanded our team by approximately 150 new employees, two-thirds of whom are in engineering, product and design, all while we were hiring the necessary finance and accounting employees to operate as a public company;
- We celebrated the five-year anniversary of the Duolingo English Test (DET). Since its inception, the DET has successfully disrupted the language assessment market, driving the shift to online testing and capturing significant market share, with plenty of growth opportunities ahead.

Financially, we generated positive operating cash flow of \$9 million for fiscal 2021. Since we went public, we had IPO-related stock-based compensation and public company readiness costs, which contributed to our net loss of \$60 million for the year. On a non-GAAP basis*, we delivered free cash flow of \$13 million and achieved near-break-even Adjusted EBITDA. This shows that we continue to manage our business with the same discipline as when we were not monetizing our products at all.

* Please refer to the Appendix at the end of this letter for a reconciliation of these non-GAAP financial measures to the most directly comparable GAAP financial measure.

In the fourth quarter:

- We accelerated our growth and achieved records in nearly all metrics, including active users, paid subscribers, and top-line results;
- Our MAUs increased 15% to 42.4 million and our DAUs increased 20% to 10.1 million compared to the prior year quarter;
- We added a record number of paid subscribers to reach 2.5 million by the end of the quarter, an increase of 56% over the prior year quarter;
- Total bookings grew 59% and revenue grew 51% compared to the prior year quarter;

This performance brings our full year 2021 bookings and revenue growth both to 55% compared to the full year 2020.

Here in our first quarterly shareholder letter, I want to elaborate on these highlights and on what we're looking forward to in 2022. But first, I will go over our mission and strategy, and how they contribute to our strong results.

Taking the long view

Our mission to develop the best education in the world and make it universally available drives everything we do. I believe that being a mission-driven company is what has led to our success because rather than spending most of our resources on short-term gains like performance marketing, we take the long view and continually improve our products and our brand.

Executing our strategy

Our strategy has five elements that create a powerful flywheel: grow users, teach better, grow subscribers, become the proficiency standard, and expand beyond language learning. The more active users we have, the more paying subscribers we will have, which means higher revenues that can be invested in teaching better and becoming the proficiency standard, which in turn attract more users. And, while language learning is a huge market opportunity, learning in general is even bigger. So as we look to 2022 and beyond, we plan to use our position as a market leader in language learning to expand to other areas of education.

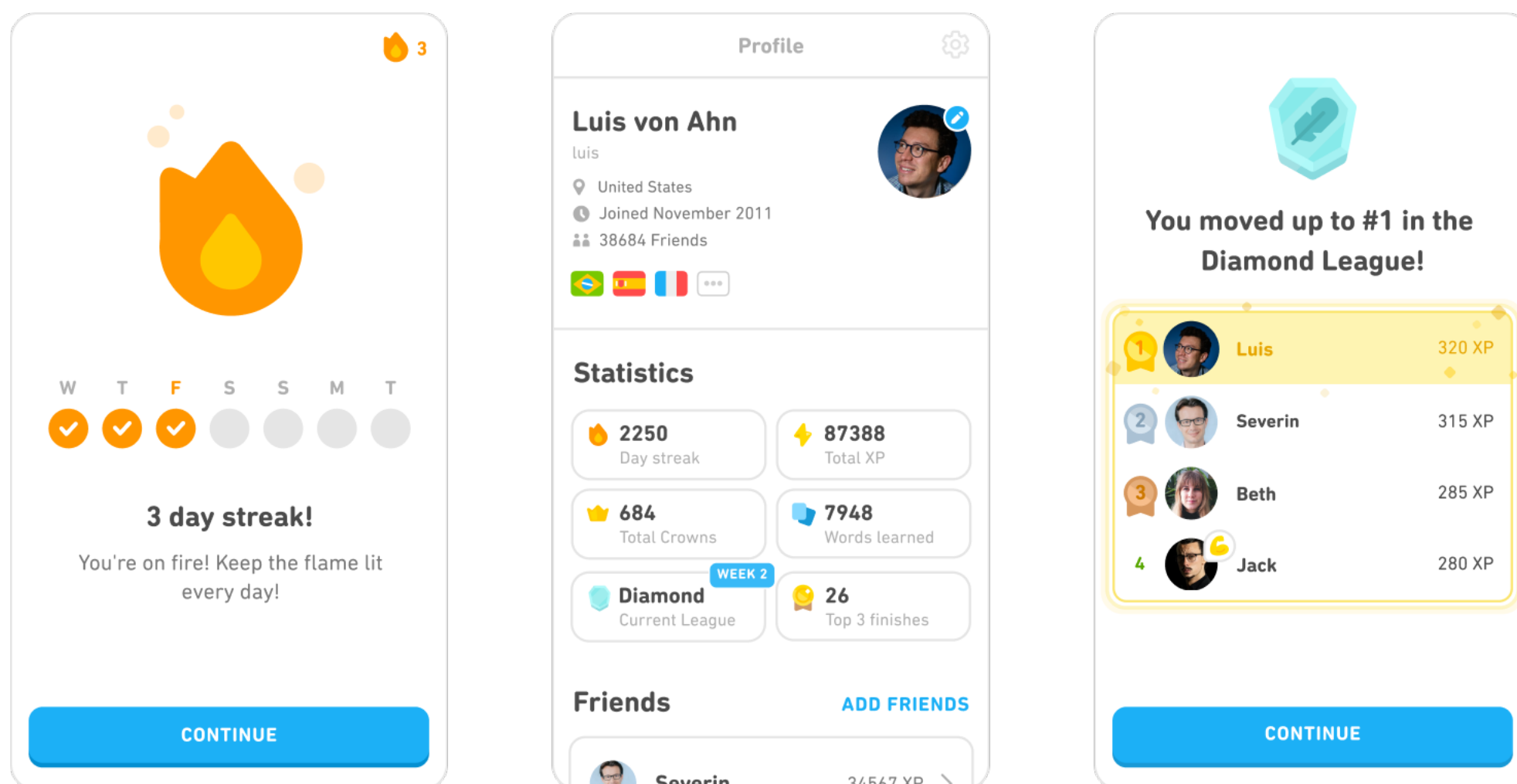
Below I lay out how we performed on each of our five strategy dimensions in 2021.

Grow Users

We are proud to be the most downloaded language app worldwide. Even though we have started spending on marketing, particularly in underpenetrated markets, in 2021, about 90% of our growth came organically through word of mouth. Our learners come from every country in the world and have a variety of reasons to learn a new language, from economic betterment, to entertainment, to brain training, to culture and family. But regardless of their motivation, they consistently tell us that we are changing their lives and that they share their love of our products with their friends.

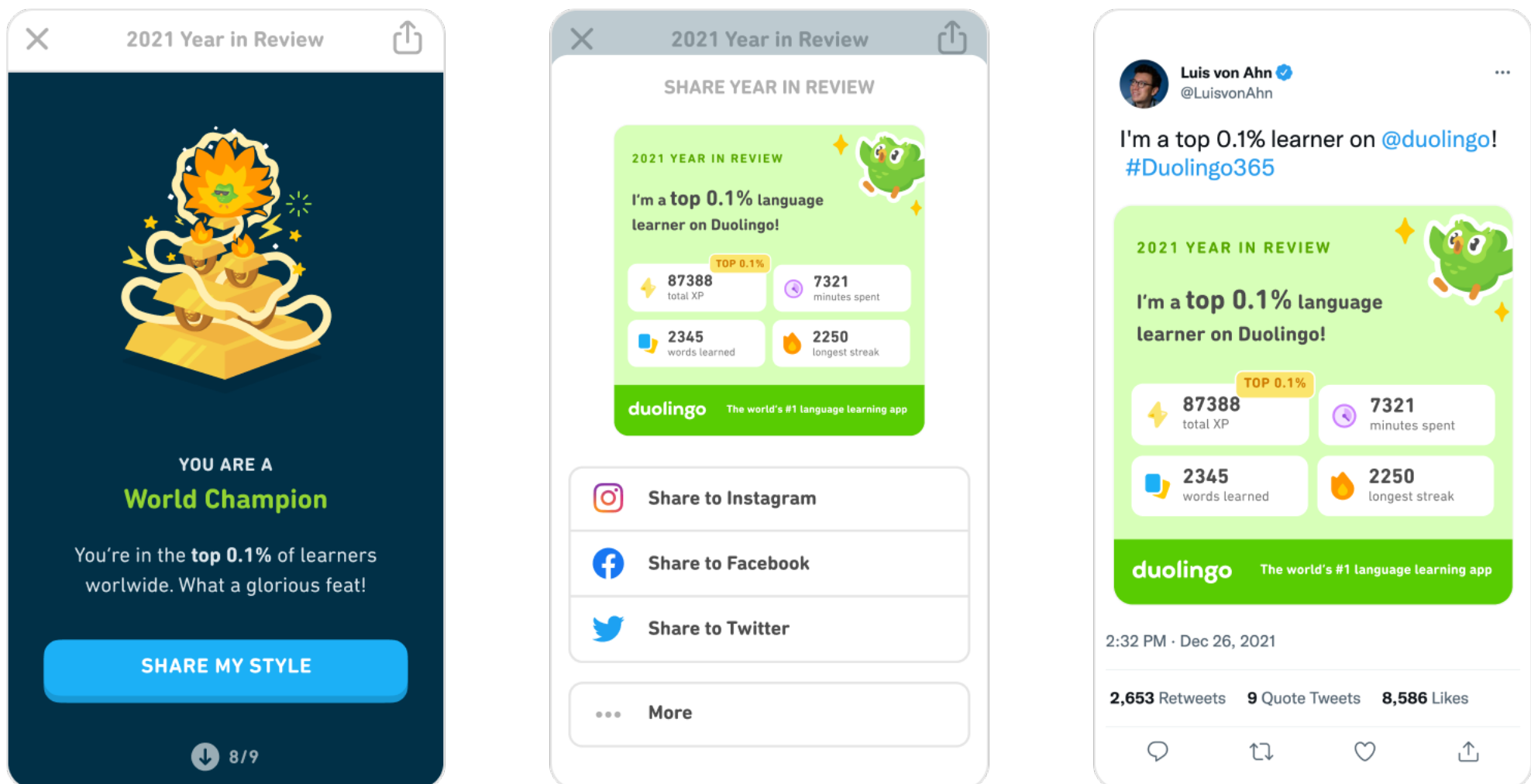
Our user growth is the direct result of our obsession with creating engaging products that teach effectively. In 2021, we added or optimized a number of features to increase user retention and word of mouth growth. One of my favorite areas of improvement has been making the Duolingo app more social, which not only increases engagement, but creates network effects. Learners on Duolingo can follow, share their progress with, and send encouraging congratulatory messages to each other. Throughout the year, the fraction of DAUs that send or receive a congratulatory message on a given day grew from 1% to 10%, and today almost 25% of our DAUs follow at least three other learners.

We also made several improvements to our streak and Leaderboards features. A streak measures the number of consecutive days a learner has used Duolingo. In 2021, we optimized how we display the streak to emphasize its importance, resulting in an impressive 1.5 million DAUs with a streak of over 365 days (meaning they have used Duolingo every day in the last year or longer!). Our Leaderboards intelligently group learners into leagues to compete for the top spots and move onto higher leagues. More than one million of our DAUs are in the highest league, called the Diamond League, and each spends on average over three hours per week learning on our platform.



When it comes to our brand, our green owl mascot, Duo, continues to be a hit in popular culture. A prime example of this is the growing popularity of our TikTok account, which in the last 6 months has attracted nearly 3 million followers and over 500 million video views, all with basically zero marketing spend.

Our global marketing strategy is to grow brand awareness in established markets and to seed it in new markets so that our organic, word-of-mouth growth can take hold. This year we had very successful campaigns that reactivated existing users and attracted new ones. In December, we launched our annual Year in Review that summarized each learner's accomplishments in 2021, including their learning stats and unique learner style. This drove a record number of shares across social media channels, with our hashtag #Duolingo365 among the top 10 trending topics on Twitter during the campaign.



Another channel of new user growth is our Duolingo for Schools product, a free tool that helps language teachers track the progress of their students who use the Duolingo app. In 2021, we launched an entirely redesigned version of Duolingo for Schools that helped us grow adoption in classrooms across the world. We estimate approximately 40% of U.S. language teachers are using Duolingo in some fashion.

Teach Better

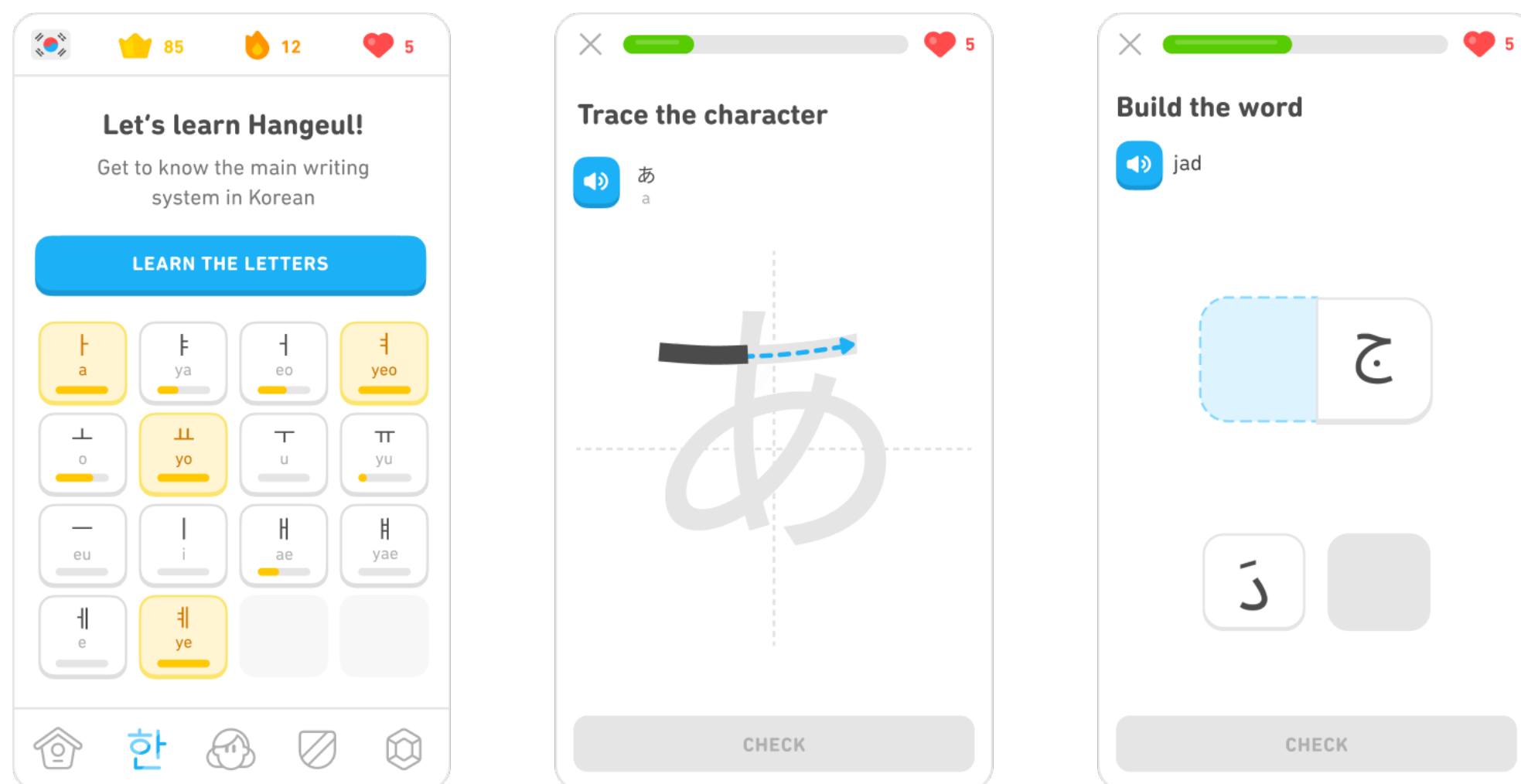
During 2021, we made great strides in teaching better. We completely redesigned about 3,000 lessons across numerous courses in order to teach more comprehensively and ensure that our curricula align more closely with international language teaching standards. We also focused on developing learners' conversational skills by adding lots of new features. For example, we added 30,000 **immersion exercises**—clever dialogues, conversations, and reading exercises—to help learners start thinking in the new language. Additionally, we scaled out our **Audio Lessons**, which lead learners through realistic conversations and help them practice speaking the lines they need in real life when communicating in their new language.

We also enhanced the way we teach grammar by expanding our **grammar-focused lessons** to more courses and adding AI-driven personalized **"Smart Tip" feedback** for when learners make grammatical mistakes.

The image displays three screenshots of a language learning application interface, each with a progress bar and a heart icon with the number 5 in the top right corner.

- First Screenshot: Complete the word**
The exercise asks the user to complete the sentence "Je rentrer ai ici demain." Below the sentence, there are three options: a greyed-out "rentre", "es", and "ez". A green bar at the bottom indicates "You are correct" with a checkmark icon and a "CONTINUE" button.
- Second Screenshot: Repeat the response**
The exercise shows a character asking "Qu'est ce que tu as mangé hier ?" with a speech bubble containing a waveform and a "TAP TO SPEAK" button. Below this, a green bar indicates "Correct!" with a checkmark icon, followed by the translation "J'ai mangé un sandwich." and "I ate a sandwich." A "CONTINUE" button is at the bottom.
- Third Screenshot: Here's a tip**
The tip states: "You typically add **-s** to adjectives describing plural nouns." Examples are given: "Le sac est cher." and "Les sacs sont chers." Below, a grammar exercise asks "Les lettres sont _____." with two options: "rouge" and "rouges". A green bar at the bottom indicates "CHECK" with a checkmark icon.

Another focus area for us in 2021 was improving how we teach languages with non-Roman writing systems, like Japanese, Hebrew, Arabic, and Russian. To do this, we developed completely [new lessons and exercise types](#) that focus on teaching letters or characters. This was a priority because Asian languages, especially Japanese and Korean, are among the world's fastest growing languages to learn.



Teaching better also means making learning more fun. Our [colorful cast of characters](#) that live within our apps and cheer on our learners is a big part of what makes our user experience so entertaining. We have been busy bringing these characters to life with major enhancements in 2021. For example, we have now launched unique computerized [voices for them](#) in six of our top languages.

Our characters also appear in Stories, one of our most popular features, which are bite-sized narratives with fun dialogues that improve reading and listening skills. This year, we published over 2,000 new Stories across our language courses, nearly doubling the amount from last year.

To ensure that all our work in teaching better is having an impact, we spend significant effort measuring the efficacy of our products. We are proud to report that our research showing that completing five units in Duolingo is comparable to four semesters of university classes has been [published as a peer-reviewed article](#) in the prestigious journal "Foreign Language Annals." We also released research reports on two additional studies, accessible from our [efficacy page](#): one showing that completing seven units in Duolingo is comparable to five semesters of university classes, and another demonstrating that most learners develop level-appropriate speaking skills after completing five units in Duolingo. This research represents real progress towards achieving our mission of providing high-quality education for everyone.

Grow Subscribers

Since none of our learning content is behind a paywall, anyone can download the Duolingo app, use it for as long as they like, and complete any of our courses free of charge. This has allowed us to scale to over 42 million MAUs.

Our premium subscription package, Duolingo Plus, gives learners an ad-free experience and many additional features that enrich their learning. Since we launched Duolingo Plus in 2017, we have consistently increased the percentage of learners that pay for a subscription by running thousands of A/B tests that make the paid experience more valuable. In 2021 the fraction of Duolingo Plus subscribers went from 4% to 6% of MAUs, and we have a long roadmap of tests that we believe will continue increasing this ratio in the years ahead.

Continuous product improvements not only increase the propensity of learners to subscribe, but also help retain them better. During the year, our paid annual subscriber retention went up by several percentage points. This allows us to deliver better engagement and education, and also benefits us financially by increasing the lifetime value of our customers.

Another way we have benefited our learners and also increased their lifetime value is by increasing our mix of annual subscriptions, which ended the year at about 85%, up from 71% at the end of 2020.

We believe we can further improve retention and increase our average bookings per subscriber through our new Family Plan package, in which up to six members can enjoy the benefits of a Plus subscription. We're encouraged by the early results of Family Plan, and look forward to increasing its visibility within the Duolingo app.

A final noteworthy achievement of 2021 in terms of growing subscribers was the success of our New Year's promotion, which is the only time of the year we offer a discount. The results of this year's discount, which ran from December 28th through January 31st, were above our expectations, and drove a meaningful increase in new subscribers.



Become the Proficiency Standard

When we launched the Duolingo English Test, our goal was to make high-stakes English proficiency testing more accessible. We made a test you could take on your computer, from anywhere, in a reasonable amount of time, and decided to charge \$49 per test as opposed to the over \$200 that incumbent tests were charging. We have seen rapid adoption of the DET over the past two years as the pandemic accelerated the acceptance of online assessment. This year, we saw the DET get accepted by even more institutions and we saw students increasingly choose to take it. This led DET revenue to grow by 63%.

And we are just getting started. During the fourth quarter, the Irish government announced that it would begin accepting the DET for student visas. We've always known there is an enormous opportunity to expand the DET beyond higher education and this represents our first step in this direction.

We are already the most downloaded language learning app globally, and we believe we can achieve similar success in testing and assessment. Our goal is to connect our test's proficiency scores with our language learning app to become the standard way people talk about how fluent they are—instead of a learner saying they are “intermediate” in French, we want them to say they are a “Duolingo 65” in French. We believe becoming this type of standard will further our competitive advantage as the brand people think about when they think about language learning.



Franck M., from the Democratic Republic of Congo, took the Duolingo English Test on his path to Columbia University (Class of '23) where he is studying computer science.

Expand Beyond Language Learning

As we shared during our IPO, language learning is a \$60 billion plus market opportunity that is growing and rapidly shifting online, and we believe we can capture a sizable portion of it. And while for many Duolingo has become synonymous with language learning, our mission is about education in general, so in the coming years we will be expanding to other subjects like early literacy and math. For early literacy, we launched Duolingo ABC on iOS over a year ago, and we're currently working on making it more engaging, on expanding its curriculum to more advanced reading levels, and on an Android version of it that we plan to launch this year.

We believe we can make our new products succeed by reusing many components of the infrastructure that made the Duolingo language learning app successful, like our AI-based personalized teaching, our A/B testing, and our gamification. We also believe Duolingo for Schools, our Family Plan subscription package, and the love that millions of people have for our brand will provide strong tailwinds for adoption of our products in new verticals. For example, by including a premium version of Duolingo ABC or our math app in our Family Plan, we can channel the success of Duolingo to these new products.

Commitment to our Employees

We are an engineering- and product-driven company, and to remain that way, we believe we need to continue to reinvest our profits into talent. This year we added over 100 new engineers, product managers and designers to further improve our existing products and launch new ones to attract more learners. This creates a virtuous circle of new user growth that leads to subscriber and profit growth, which in turn leads to hiring more product and engineering talent. In the coming years, we plan to continue investing significantly in growing our talented engineering, product, and design teams.

In 2021, we had less than a 6% attrition rate, much lower than the industry average, especially in a year marked by high levels of employee transition and resignation in the tech space. We continue attracting and retaining amazing talent because Duolingo is recognized as a great place to work, thanks to our mission-driven and fun culture.

What to Expect in 2022

We plan to continue managing the business with cost and capital discipline while investing in R&D to drive growth. Duolingo is known as a market leader with a strong track record of product innovation, and we expect 2022 to be no different. In addition to running thousands of A/B tests to optimize our metrics, we have a number of product improvements in the works, some of which are described below:

- We're planning to introduce an entirely new design of the Duolingo app home screen that should encourage learners to be even more engaged;
- We'll continue making Duolingo more social with features that allow learners to interact with each other. We believe that following friends not only increases accountability, but also drives engagement and makes learning more fun;

- We'll more heavily promote our Family Plan, which we believe will further increase subscriber retention and eventually help us expand to other education verticals;
- We'll be making Duolingo for Schools more valuable through mobile and in-class experiences;
- We'll continue to grow acceptance of the DET at institutions around the world, especially in Canada, the U.K., and Australia, and we'll experiment with new value-added features;
- We're refining our Duolingo ABC app with a fresh design to increase adoption, engagement, and learning efficiency;
- And we are excited to launch a math app towards the end of the year.

Stay tuned for updates on these and other product developments in the coming quarters. Or better yet, download our apps and experience them for yourself!

In Closing

We have a large and growing market opportunity with nearly two billion language learners worldwide. Today a majority of language education is still taking place in person, but the shift to digital is rapidly accelerating and we're in a great position to not only drive that shift but to directly benefit from it, furthering our mission, and impacting more peoples' lives. Despite how far we've come since we first launched our language learning app, we are still in the early stages of growth and are excited about the many attractive opportunities in front of us.

I would like to close by extending my gratitude to our team, whose tireless efforts and dedication make Duolingo such a great product and company. And I would like to thank you, our shareholders, for your commitment and continued support.



A stylized, handwritten signature in black ink, appearing to read 'Luis von Ahn'.

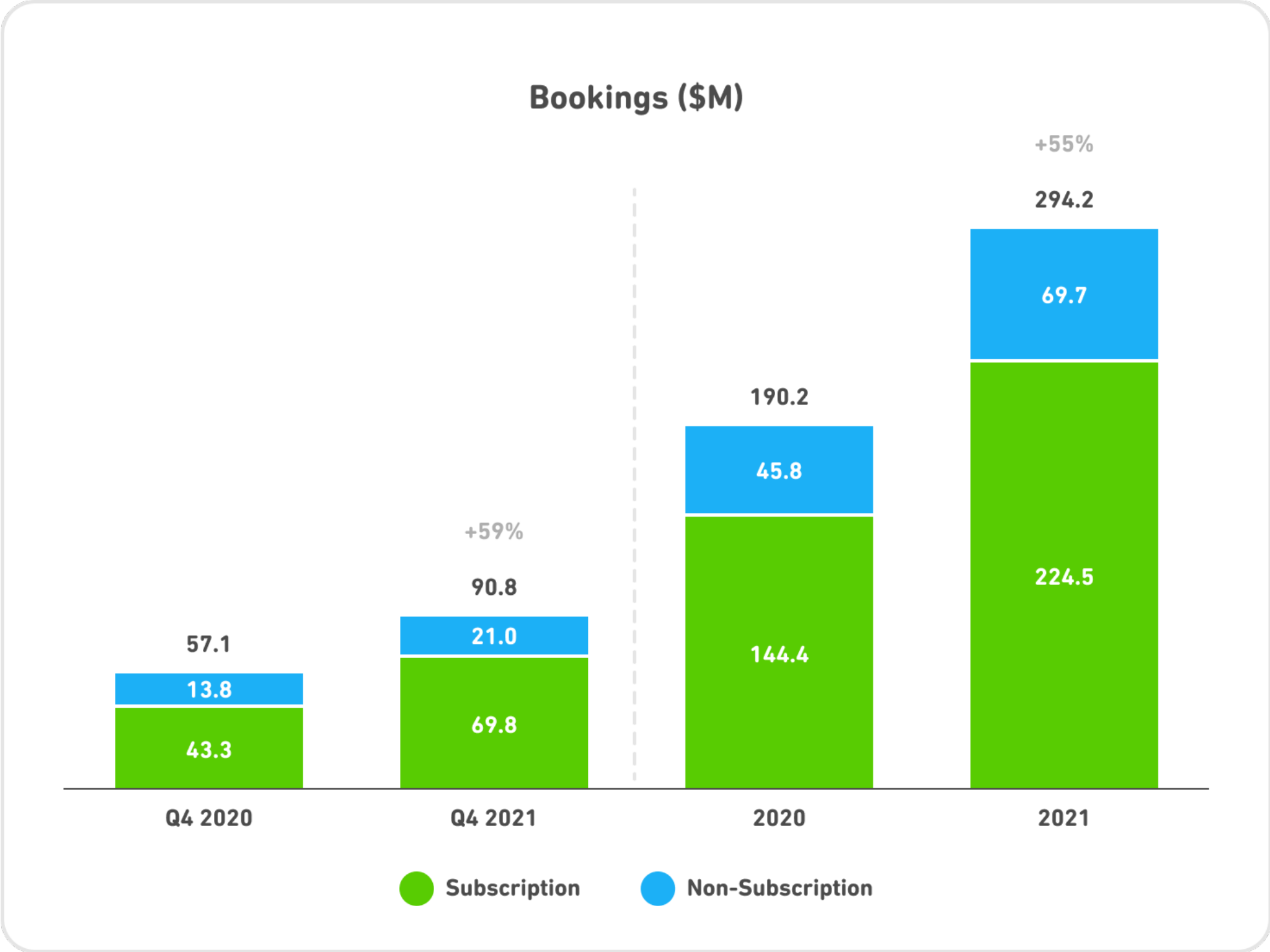
Luis von Ahn
CEO and Co-Founder

financial performance and outlook

Summary of financial and operating metrics

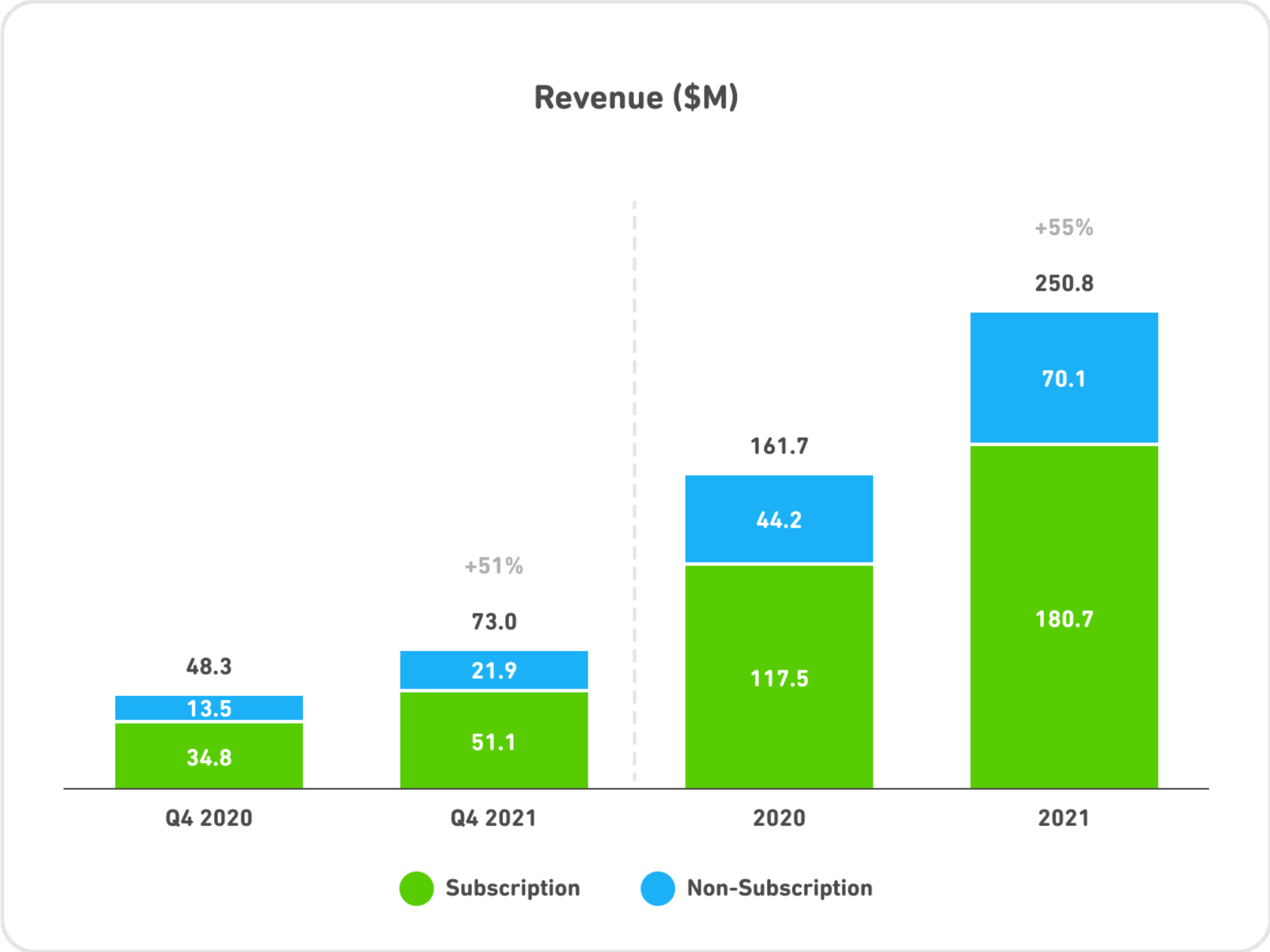
(in millions)	Q4 2020	Q4 2021	YoY	2020	2021	YoY
Operating Metrics						
Monthly active users (MAUs)	37.0	42.4	15%	36.7	40.5	10%
Daily active users (DAUs)	8.4	10.1	20%	8.2	9.6	18%
Paid Subscribers (period end)	1.6	2.5	56%	1.6	2.5	56%
Total Bookings	\$57.1	\$90.8	59%	\$190.2	\$294.2	55%
Subscription Bookings	\$43.3	\$69.8	61%	\$144.4	\$224.5	56%
GAAP Financial Metrics						
Revenues	\$48.3	\$73.0	51%	\$161.7	\$250.8	55%
Gross Profit	\$35.4	\$53.1	50%	\$115.7	\$181.6	57%
Gross Margin (%)	73.4%	72.7%	~(70 bps)	71.6%	72.4%	~80 bps
Net Income (Loss)	(10.4)	(17.5)	—	(15.8)	(60.1)	—
Net cash from operating activities	\$3.7	\$0.4	—	\$17.7	\$9.2	—
Non-GAAP Financial Metrics						
Adjusted EBITDA	\$2.9	\$0.3	—	\$3.6	(1.1)	—
Free Cash Flow	\$2.5	\$1.6	—	\$14.0	\$12.7	—

* Please refer to the Appendix at the end of this letter for a reconciliation of these non-GAAP financial measures to the most directly comparable GAAP financial measure.



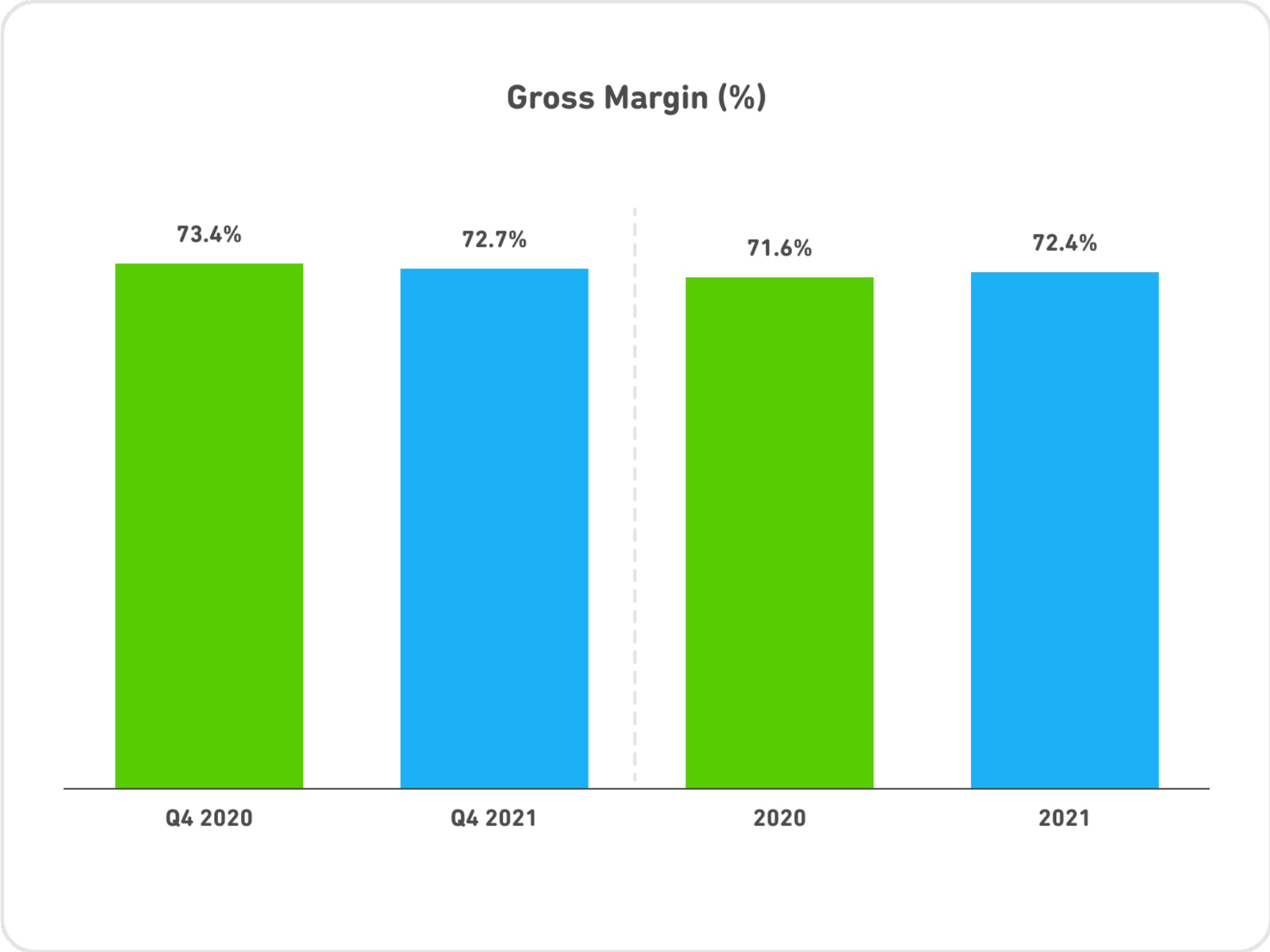
In the fourth quarter, total bookings reached an all-time high of \$90.8 million, growing 59% year-over-year. Subscription bookings grew 61% year-over-year to a record \$69.8 million, driven by the growth in paid subscribers and the continued shift to annual plan subscriptions.

Our full year 2021 total bookings and subscription bookings were \$294.2 million and \$224.5 million, respectively. Total bookings grew 55% year-over-year and subscription bookings grew 56% year-over-year.



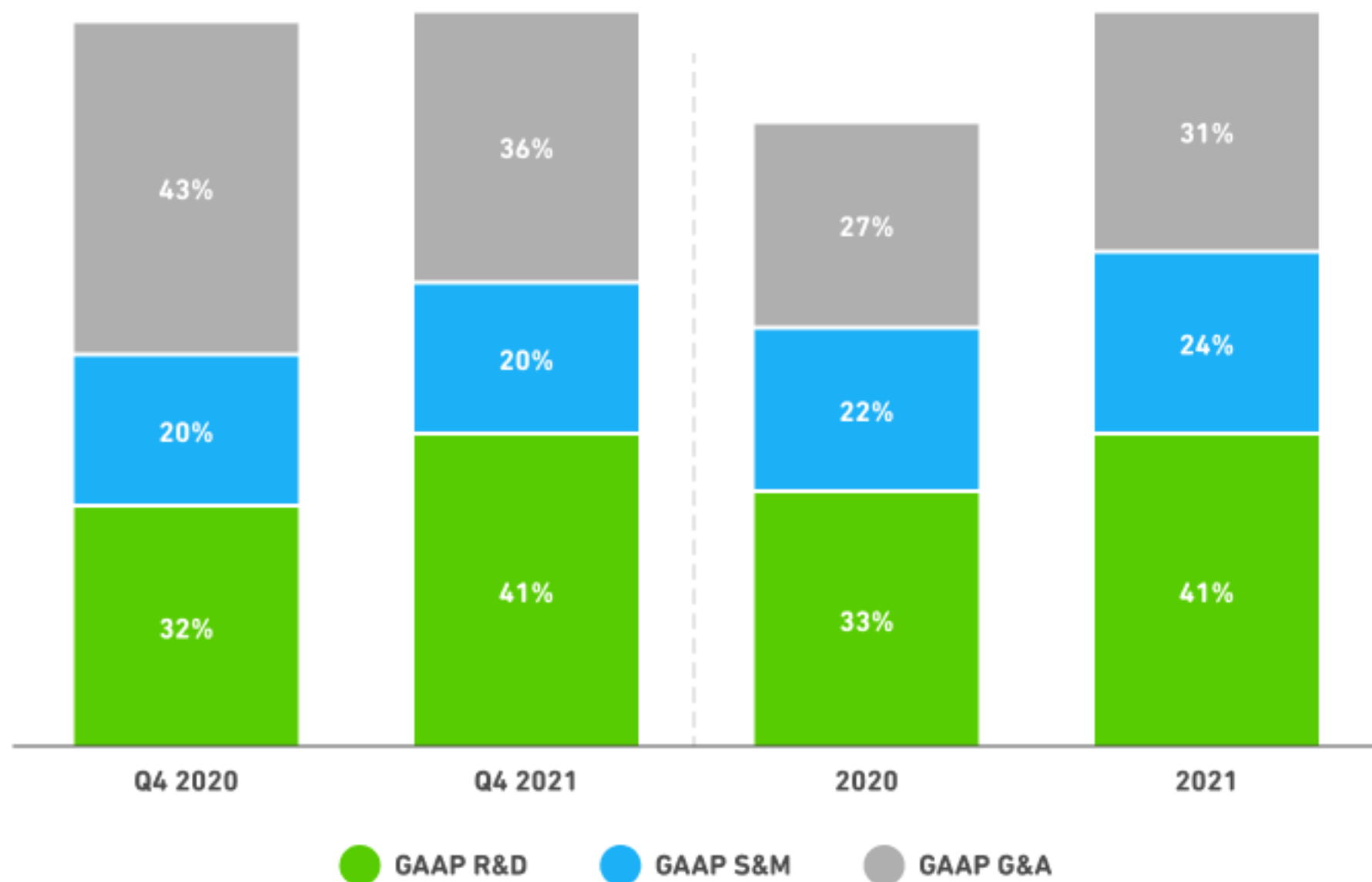
In the fourth quarter, revenues were \$73.0 million, growing 51% year over year. In 2021, revenues reached \$250.8 million, growing 55% year over year. The main driver was an increase in subscription revenue, which was due to an increase in the average number of paid subscribers during the twelve months ended December 31, 2021 as compared to the twelve months ended December 31, 2020.

Non-subscription revenues reached an all-time quarterly high of \$21.9 million, growing 62% year-over-year. This revenue includes advertising, in-app purchase (IAP), and Duolingo English Test revenue. A growing portion of this revenue is from IAPs because we made significant progress this year in optimizing how learners use those purchases to enhance their Duolingo experience.



Gross margin was 72.7% in the fourth quarter, and it was 72.4% for the full 2021 year. The slight decline in the fourth quarter from the year ago quarter was driven by additional proctoring costs in our DET business. On an annual basis, gross margin grew about 80 basis points in 2021, primarily driven by higher subscription margins due to improved retention, and increased advertising margins driven by an increase in average ad revenues per DAU, which was partially offset by a decrease in Duolingo English Test margins driven by increased proctoring costs.

GAAP Operating Expenses (% of Revenue)



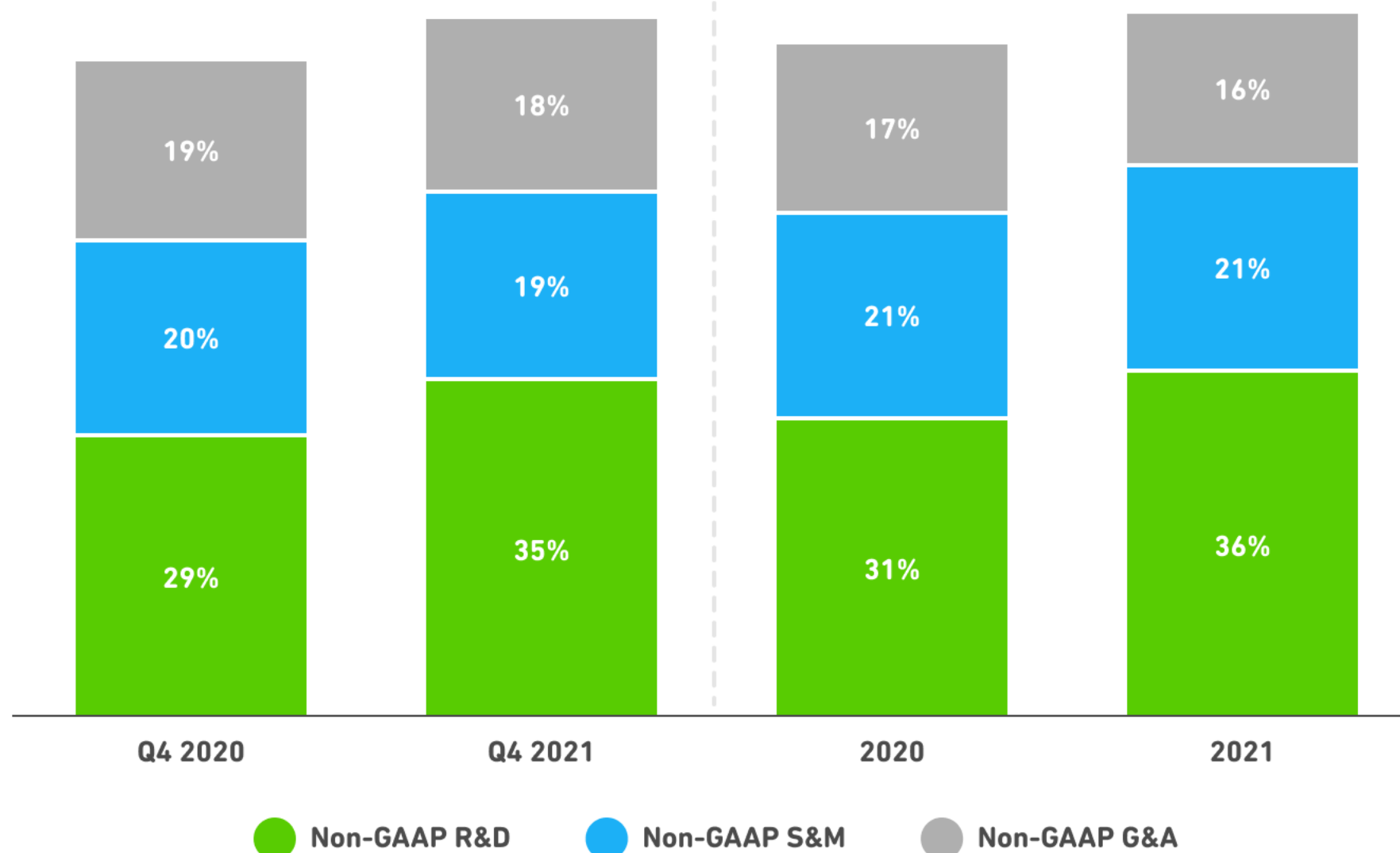
Total GAAP operating expenses were \$70.5 million and \$241.6 million in the fourth quarter and full year 2021, respectively. We report three categories of operating expenses: Research and Development (R&D), Sales and Marketing (S&M), and General and Administrative (G&A).

GAAP R&D expense increased from 32% to 41% of revenue during the fourth quarter and from 33% to 41% during the year. The increase for both periods is mainly attributable to our growth in headcount leading to an increase in employee costs. R&D continues to be our largest operating expense as we invest heavily in it in order to drive user engagement and customer satisfaction, which we believe helps to drive organic growth in MAUs and DAUs. This in turn drives additional growth in, and better retention of, paid subscribers, as well as increased advertising opportunities with free users.

GAAP S&M expense remained consistent at 20% of revenue in the fourth quarter and increased from 22% to 24% of revenue for the year. In absolute dollar terms, the increase in GAAP S&M expense was primarily driven by spending on performance marketing where we found opportunities to grow quality DAUs at low cost and by brand marketing in priority markets such as Japan, India and Southeast Asia.

GAAP G&A expense decreased from 43% to 35% of revenue during the fourth quarter, and increased from 27% to 31% of revenue in 2021 compared to the prior year. The main driver of this increase is IPO-related stock-based compensation and public company readiness costs.

Non-GAAP Operating Expenses (% of Revenue)



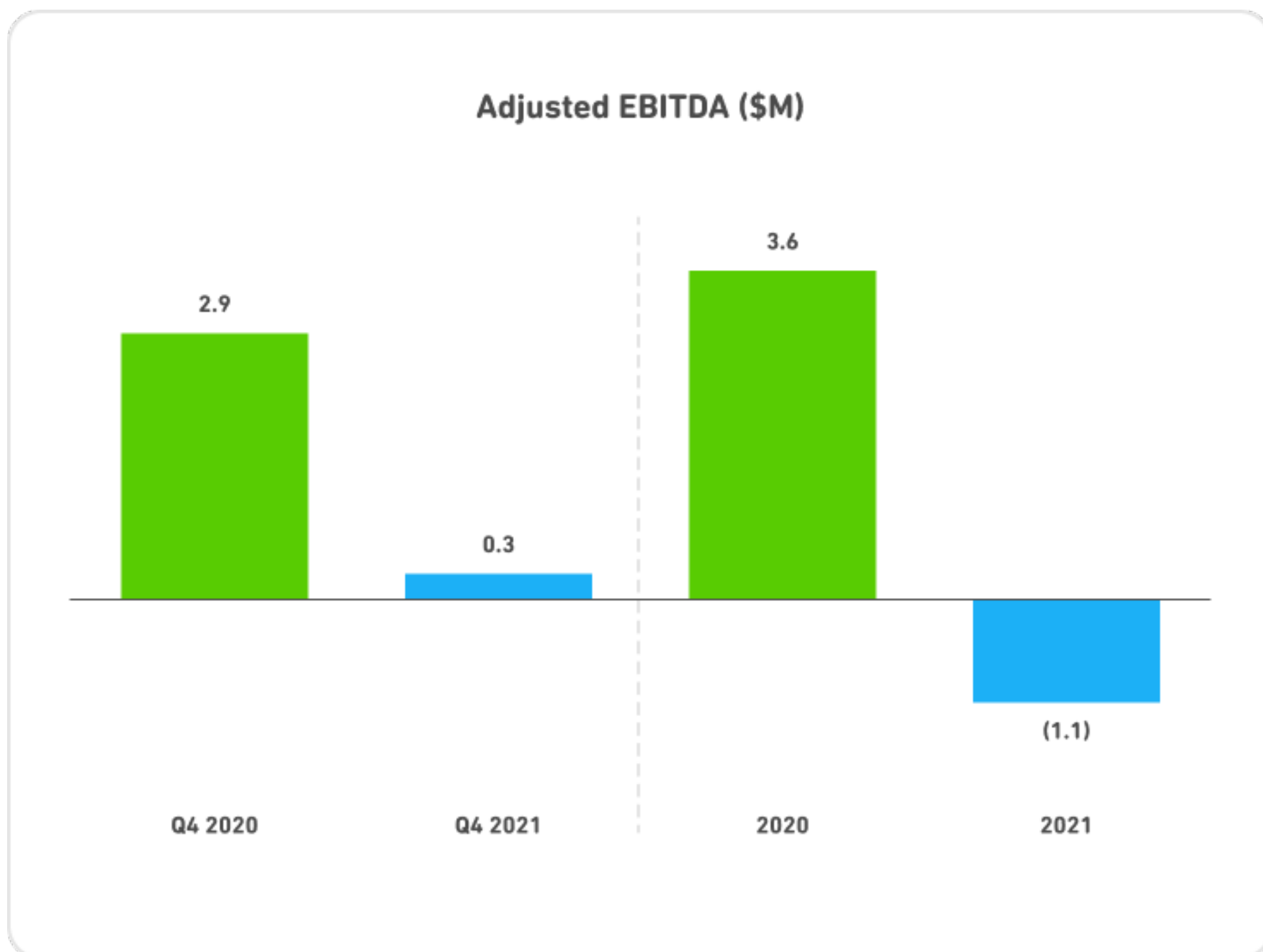
Non-GAAP operating expenses represent GAAP expenses adjusted for depreciation, amortization, stock-based compensation, IPO and public company readiness costs, as well as other expenses. For reference, in 2021, we recognized \$40.8 million in stock-based compensation. A majority of this was related to the expenses driven by the IPO and from the achievement of certain performance hurdles for our founder share grants. You can find a reconciliation of these items at the end of this letter.

Non-GAAP R&D expenses increased from 29% to 35% of revenue in the fourth quarter, and from 31% to 36% in 2021. The absolute dollar increase was primarily driven by an increase in headcount over these periods. We continued to invest in R&D by adding engineers, product managers and designers throughout the year, and as we have described elsewhere in this letter, plan to continue to do this in 2022 and beyond.

During the fourth quarter, non-GAAP S&M declined slightly as a percentage of revenue compared to the prior year quarter, and remained flat on an annual basis. The absolute dollar increase in non-GAAP S&M expense during 2021 was described above.

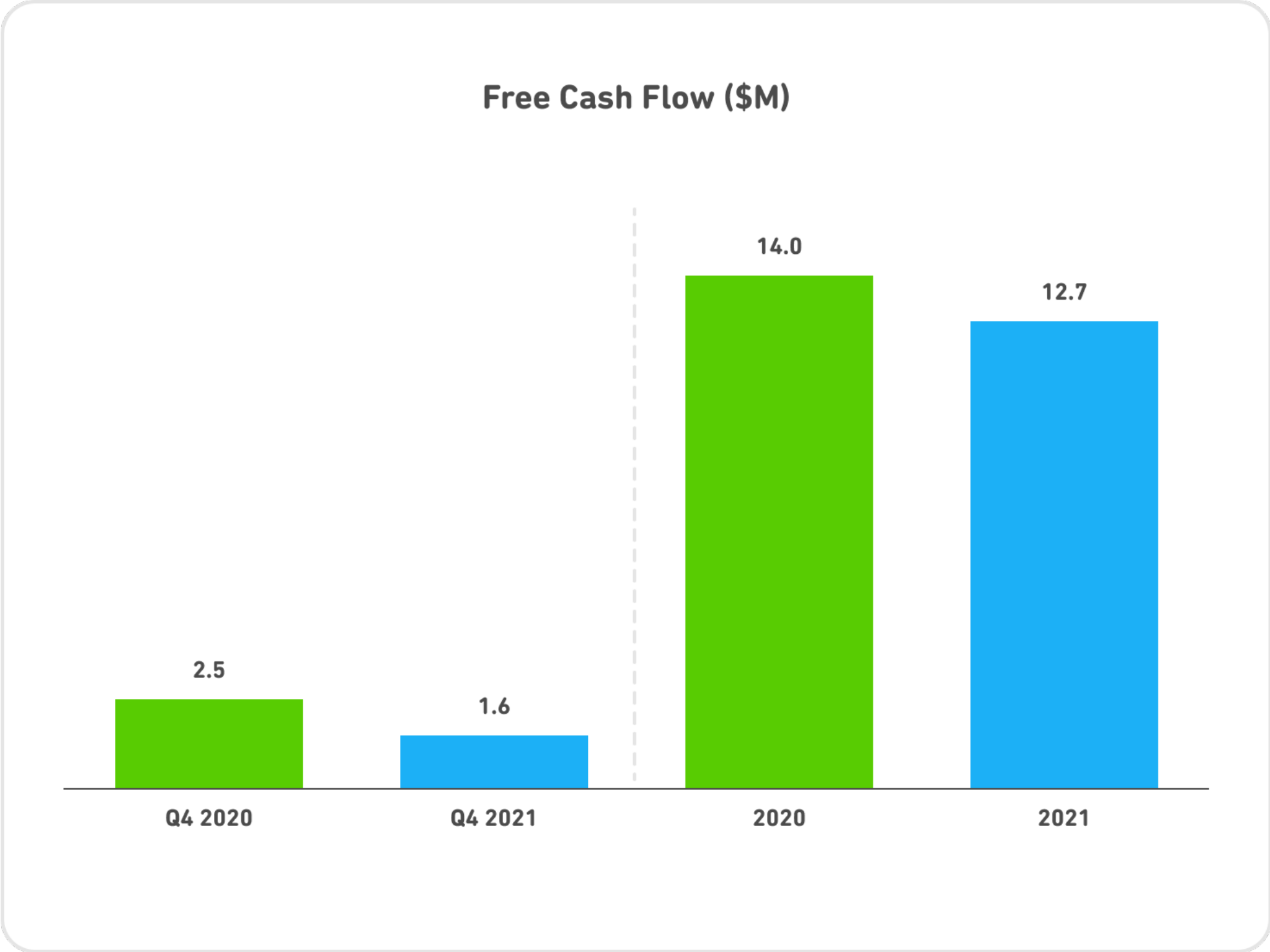
Non-GAAP G&A declined slightly in the fourth quarter and full year 2021 as a percentage of revenue, as compared to the prior year periods. The absolute dollar increase in non-GAAP G&A for both periods was primarily related to higher professional fees and return to office expenses.

We expect to achieve leverage in both S&M and G&A expense over the long-term.



As we have since our founding, we continue to manage the business with cost and capital discipline, and as a result achieved nearly break-even Adjusted EBITDA results for the full year 2021. In addition, we generated positive free cash flow for both the full year and the fourth quarter. As a reminder, we define free cash flow as net cash provided by operating activities, reduced by purchases of property and equipment, capitalized software development costs, and increased by IPO and public company readiness costs, taxes paid related to stock-based compensation equity awards and other costs, as we believe they are not indicative of future liquidity. A reconciliation can be found at the end of this letter.

Adjusted EBITDA declined to \$0.3 million and a loss of \$1.1 million during the fourth quarter and full year 2021, respectively, driven by growth in non-GAAP operating expenses, which grew at a quicker rate than revenue and gross profit for these periods.



During the fourth quarter and full year 2021, we generated \$1.6 million and \$12.7 million in free cash flow, respectively. The decline from the prior year periods was primarily driven by a decrease in net cash provided by operating activities. During 2021, we also incurred higher capital expenditures and capitalized software development costs.

1Q22 and FY22 guidance

Duolingo is providing the following guidance for the first quarter and the full year ending December 31, 2022.

(in millions)	Q1 2022	FY 2022
Bookings	\$92 - 95	\$372 - 382
YoY Bookings Growth	40% - 44%	26% - 30%
Revenues	\$75.5 - 78.5	\$332 - 342
YoY Revenue Growth	36% - 42%	32% - 36%
Adjusted EBITDA	\$(5.5) - (2.5)	\$(5) - (1)

With regards to the Non-GAAP Adjusted EBITDA outlook provided above, a reconciliation to GAAP net loss has not been provided as the quantification of certain items included in the calculation of GAAP net loss cannot be calculated or predicted at this time without unreasonable efforts. For example, the non-GAAP adjustment for stock-based compensation expense requires additional inputs such as number of shares granted and market price that are not currently ascertainable, and the non-GAAP adjustment for certain legal, tax and regulatory reserves and expenses depends on the timing and magnitude of these expenses and cannot be accurately forecasted. For the same reasons, we are unable to address the probable significance of the unavailable information, which could have a potentially unpredictable, and potentially significant, impact on our future GAAP financial results.

Conference Call

Duolingo will host a conference call to discuss its quarterly results today, March 3, 2022 at 5:30 p.m. ET. The live webcast of Duolingo's earnings conference call will be publicly available and can be accessed at investors.duolingo.com. A replay will be available on the Investor Relations website one hour following completion of the call.

About Duolingo

Duolingo is the leading mobile learning platform globally. With over 500 million downloads and 42 million monthly active users, its flagship app has organically become the world's most popular way to learn languages and the top-grossing app in the Education category on both Google Play and the Apple App Store. With technology at the core of everything it does, Duolingo has consistently invested to provide learners a fun, engaging, and effective learning experience while remaining committed to its mission to develop the best education in the world and make it universally available.

Definitions

Subscription Bookings and Total Bookings. Subscription bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus. Total bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus, a registration for a Duolingo English Test, an in-app purchase for a virtual good and from advertising networks for advertisements served to our users. We believe bookings provide an indication of trends in our operating results, including cash flows, that are not necessarily reflected in our revenues because we recognize subscription revenues ratably over the lifetime of a subscription, which is generally from one to twelve months.

Monthly Active Users (MAUs). MAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each month. MAUs are reported for a measurement period by taking the average of the MAUs for each calendar month in that measurement period. MAUs are a measure of the size of our global active user community on Duolingo.

Daily Active Users (DAUs). DAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each calendar day. DAUs are reported for a measurement period by taking the average of the DAUs for each day in that measurement period. DAUs are a measure of the consistent engagement of our global user community on Duolingo.

Throughout this document, the measurement period for MAUs and DAUs is the three months ended December 31, 2021 and the same period in the prior year where applicable, and the analysis of results is based on those periods.

Paid Subscribers. Paid subscribers are defined as users who pay for access to Duolingo Plus and had an active subscription as of the end of the measurement period. Each unique user account is treated as a single paid subscriber regardless of whether such user purchases multiple subscriptions, and the count of paid subscribers does not include users who are currently on a free trial.

Non-GAAP Financial Measures

We use certain non-GAAP financial measures to supplement our consolidated financial statements, which are presented in accordance with GAAP. These non-GAAP financial measures include Adjusted EBITDA and free cash flow. Please refer to the definitions and reconciliations at the end of this shareholder letter. We use these non-GAAP financial measures for financial and operational decision-making and as a means to evaluate period-to-period comparisons. By excluding certain items that may not be indicative of our recurring core operating results, we believe that Adjusted EBITDA and free cash flow provide meaningful supplemental information regarding our performance. Accordingly, we believe these non-GAAP financial measures are useful to investors and others because they allow for additional information with respect to financial measures used by management in its financial and operational decision-making and they may be used by our institutional investors and the analyst community to help them analyze the health of our business. However, there are a number of limitations related to the use of non-GAAP financial measures, and these non-GAAP measures should be considered in addition to, not as a substitute for or in isolation from, our financial results prepared in accordance with GAAP. Other companies, including companies in our industry, may calculate these non-GAAP financial measures differently or not at all, which reduces their usefulness as comparative measures.

Forward-Looking Statements

This Shareholder Letter contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this Shareholder Letter, including without limitation, statements regarding our business model and strategic plans and our financial outlook for the first quarter and fiscal year 2022 are forward-looking statements. Without limiting the generality of the foregoing, you can identify forward-looking statements because they contain words such as "may," "will," "shall," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential," "goal," "objective," "seeks," or "continue" or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans, or intentions. Such forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various factors, including, but not limited to: our ability to retain and grow our users and sustain their engagement with our products; competition in the online language learning industry; our limited operating history; our ability to achieve profitability; our ability to manage our growth and operate at such scale; the success of our investments; our reliance on third-party platforms to store and distribute our products and collect revenue; our reliance on third-party hosting and cloud computing providers; our ability to compete for advertisements; acceptance by educational organizations of technology-based education; our ability to access, collect, and use personal data about our users and payers, and to comply with applicable data privacy laws; potential intellectual property-related litigation and proceedings, our ability adequately obtain, protect and maintain our intellectual property rights; and the other important factors more fully detailed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021, as any such factors may be updated from time to time in our other filings with the SEC, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which are accessible on the SEC's website at www.sec.gov and the Company's Investor Relations website at <https://investors.duolingo.com>. All forward-looking statements speak only as of the date of this Shareholder Letter and, except as required by applicable law, we have no obligation to update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Website Information

We routinely post important information for investors on the Investor Relations section of our website, <https://investors.duolingo.com> and also from time to time may use social media channels, including our Twitter account (twitter.com/duolingo) and our LinkedIn account ([linkedin.com/company/duolingo/](https://www.linkedin.com/company/duolingo/)), as an additional means of disclosing public information to investors, the media and others interested in us. It is possible that certain information we post on our website and on social media could be deemed to be material information, and we encourage investors, the media and others interested in us to review the business and financial information we post on our website and on the social media channels identified above, in addition to following our press releases, SEC filings, public conference calls, presentations and webcasts. The information contained on, or that may be accessed through, our website and our social media channels is not incorporated by reference into, and is not a part of, this document.

DUOLINGO INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands)	December 31,	
	2021	2020
Cash and cash equivalents	553,922	120,490
Accounts receivable	33,163	20,450
Deferred cost of revenues	24,219	13,585
Prepaid expenses and other current assets	7,967	3,855
Non-current assets	42,040	17,359
Total Assets	\$661,311	\$175,739
Accounts payable	7,818	2,196
Deferred revenues	98,267	54,792
Other current liabilities	13,046	8,702
Long-term liabilities	29,124	8,131
Total liabilities	148,255	73,821
Convertible preferred stock, \$0.0001 par value, no shares issued and outstanding at December 31, 2021 and 19,074 shares issued and outstanding at December 31, 2020	-	182,609
Total stockholders' equity (deficit)	513,056	(80,691)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	\$661,311	\$175,739

DUOLINGO INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF NET LOSS AND COMPREHENSIVE LOSS

(in thousands)	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2021	2020	2021	2020
Revenues	\$73,014	\$48,268	\$250,772	\$161,696
Cost of revenues	19,952	12,863	69,186	45,987
Gross profit	53,062	35,405	181,586	115,709
Operating expenses:				
Research and development	30,019	15,443	103,833	53,024
Sales and marketing	14,511	9,705	59,170	34,983
General and administrative	25,947	20,828	78,590	43,713
Total operating expenses	70,477	45,976	241,593	131,720
Loss from operations	(17,415)	(10,571)	(60,007)	(16,011)
Other income, net of other expenses	\$6	\$187	\$49	\$303
Loss before provision for income taxes	(17,409)	(10,384)	(59,958)	(15,708)
Provision for income taxes	108	23	177	68
Net loss and comprehensive loss	\$(17,517)	\$(10,407)	\$(60,135)	\$(15,776)

DUOLINGO INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Twelve Months Ended December 31,	
	2021	2020
Net loss	\$(60,135)	\$(15,776)
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	2,726	2,256
Stock-based compensation	40,804	17,031
Changes in assets and liabilities	25,775	14,197
Net cash provided by operating activities	<u>9,170</u>	<u>17,708</u>
Net cash used for investing activities	<u>(6,206)</u>	<u>(4,014)</u>
Net cash provided by financing activities	<u>430,468</u>	<u>46,953</u>
Net increase in cash and cash equivalents	433,432	60,647
Cash and cash equivalents - Beginning of period	120,490	59,843
Cash and cash equivalents - End of period	<u>\$553,922</u>	<u>\$120,490</u>

appendix

Reconciliation: Adjusted EBITDA

Adjusted EBITDA is defined as net loss excluding interest (income) expense, net, income tax provision, depreciation and amortization, Initial Public Offering (“IPO”) and public company readiness costs, stock-based compensation expenses related to equity awards, tender offer-related costs and other expenses. Adjusted EBITDA is used by management to evaluate the financial performance of our business and we present Adjusted EBITDA because we believe it is helpful in highlighting trends in our operating results and that it is frequently used by analysts, investors and other interested parties to evaluate companies in our industry. The following table presents a reconciliation of our net loss, the most directly comparable financial measure presented in accordance with GAAP, to Adjusted EBITDA.

(in thousands)	Q4 2020	Q4 2021	2020	2021
Net Income (Loss)	\$(10,407)	\$(17,517)	\$(15,776)	\$(60,135)
Less: Interest Income	(1)	(12)	(231)	(19)
Plus: Provision for Income Taxes	23	108	68	177
Plus: Depreciation & Amortization	607	757	2,256	2,726
Plus: IPO and Public Company Readiness Costs	155	656	282	3,909
Plus: Stock-based Compensation and Expenses Related to Equity Awards	12,514	16,337	17,031	42,457
Plus: Tender Offer-Related Costs	-	-	-	5,599
Plus: Other expenses	-	-	-	4,220
Adjusted EBITDA	\$2,891	\$329	\$3,630	\$(1,066)

Reconciliation: Free Cash Flow

Free cash flow represents net cash provided by operating activities, reduced by purchases of property and equipment, capitalized software development costs, and increased by IPO and public company readiness costs, taxes paid related to stock-based compensation equity awards and other costs, as we believe they are not indicative of future liquidity. We believe that free cash flow is a measure of liquidity that provides useful information to our management, investors and others in understanding and evaluating the strength of our liquidity and future ability to generate cash that can be used for strategic opportunities or investing in our business. The following table presents a reconciliation of net cash provided by operating activities, the most directly comparable financial measure calculated in accordance with GAAP, to free cash flow.

(in thousands)	Q4 2020	Q4 2021	2020	2021
Net cash provided by operating activities	\$3,681	\$432	\$17,708	\$9,170
Less: Capitalized Software Development Costs	(515)	(585)	(638)	(2,620)
Less: Purchases of Property and Equipment	(819)	(523)	(3,376)	(3,586)
Plus: IPO and Public Company Readiness Costs	155	656	282	3,909
Plus: Taxes Paid Related to Stock-Based Compensation on Equity Awards	-	1,653	-	1,653
Plus: Other adjustments	-	-	-	4,220
Free Cash Flow	\$2,502	\$1,633	\$13,976	\$12,746

Reconciliation: GAAP to Non-GAAP Operating Expense

(in thousands)	Q4 2020	Q4 2021	2020	2021
Total GAAP Operating Expense	\$45,976	\$70,477	\$131,720	\$241,593
Less: Depreciation & Amortization	(598)	(757)	(2,170)	(2,726)
Less: Stock-based Compensation	(12,512)	(14,684)	(17,025)	(40,796)
Less: Other Adjustments	(155)	(2,309)	(282)	(15,371)
Non-GAAP Operating Expense	\$32,711	\$52,727	\$112,243	\$182,700

Reconciliation: GAAP to Non-GAAP R&D Expense

(in thousands)	Q4 2020	Q4 2021	2020	2021
Total GAAP R&D Expense	\$15,443	\$30,019	\$53,024	\$103,833
Less: Depreciation & Amortization	-	(127)	-	(260)
Less: Stock-based Compensation	(1,268)	(3,549)	(2,773)	(9,298)
Less: Other Adjustments	-	(631)	-	(3,979)
Non-GAAP R&D Expense	\$14,175	\$25,712	\$50,251	\$90,296

Reconciliation: GAAP to Non-GAAP S&M Expense

(in thousands)	Q4 2020	Q4 2021	2020	2021
Total GAAP S&M Expense	\$9,705	\$14,511	\$34,983	\$59,170
Less: Depreciation & Amortization	(147)	(224)	(546)	(725)
Less: Stock-based Compensation	(52)	(333)	(348)	(881)
Less: Other Adjustments	-	(53)	-	(4,905)
Non-GAAP S&M Expense	\$9,506	\$13,901	\$34,089	\$52,659

Reconciliation: GAAP to Non-GAAP G&A Expense

(in thousands)	Q4 2020	Q4 2021	2020	2021
Total GAAP G&A Expense	\$20,828	\$25,947	\$43,713	\$78,590
Less: Depreciation & Amortization	(451)	(406)	(1,624)	(1,741)
Less: Stock-based Compensation	(11,192)	(10,802)	(13,904)	(30,617)
Less: Other Adjustments	(155)	(1,625)	(282)	(6,487)
Non-GAAP G&A Expense	\$9,030	\$13,114	\$27,903	\$39,745

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