



Twitter Q2 2018 Earnings Report
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PRESENTATION

Krista Bessinger, Twitter, Inc. - Vice President, Investor Relations

Hi, everyone, and thanks for joining our Q2 earnings conference call. We have with us today our CEO, Jack Dorsey; and CFO, Ned Segal. We hope you had a chance to read our shareholder letter published on our Investor Relations website this morning.

Like last quarter, we'll begin with just a few prepared remarks before opening the call directly to your questions. During the Q&A, we'll take questions asked via Twitter in addition to questions from conference call participants. Questions submitted via Twitter should be directed to @TwitterIR using the #TWTR.

We would also like to remind everyone that we'll be making forward-looking statements on this call such as our outlook for Q3 and the full year of 2018 and our operational plans and strategies. Actual results could differ materially from those contemplated by our forward-looking statements, and the reported results should not be considered as an indication of future performance. Please take a look at our filings with the SEC for a discussion of the factors that could cause our results to differ materially. Also, the forward-looking statements on this call are based on information available to us as of today's date, and we disclaim any obligation to update any forward-looking statements except as required by law.

Also during this call, we will discuss certain non-GAAP financial measures. Reconciliations to the most directly comparable GAAP financial measures are included in our shareholder letter. These non-GAAP measures are not intended to be a substitute for our GAAP results. And finally, this call in its entirety is being webcast from our Investor Relations website. An audio replay of this call will also be available via Twitter and on our website in a few hours.

And with that, I would like to turn it over to Jack.

Jack Dorsey Twitter, Inc. - Co-Founder and CEO

Good morning from San Francisco, and thank you all for joining us. As you saw from our results, we reported a solid quarter, we achieved strong revenue growth, made important progress in our health initiatives and rolled out product updates that make it easier to find and follow breaking news and events. These efforts deliver real tangible improvement to the experience people have.

Before I talk in detail about each of those items, I want to take a step back and provide some context to our results. A few weeks ago, a reporter tweeted, "What app has changed your life the most in the past 10 years?" Musa Tariq responded, "Twitter. Introduced me to my wife, some of my best friends, my mentors, my best hires and colleagues, and through it I learn from people I only could have dreamt of prior to its existence." That experience, like millions of others, illustrates unique value of Twitter and shows the important role it plays in everyday life.

Here are 3 other recent moments we wanted to highlight. People use Twitter to talk about what's happening. There were 72,000 tweets per minute at the end of Game 1 of the NBA Finals when J.R. Smith dribbled out the clock instead of taking a shot. Dub Nation thanks you, J.R.

Twitter provokes conversation. When Serena Williams tweeted, "She took her first steps. I was training and missed it. I cried." it prompted an outpouring of support and started a dialogue about the challenges working mothers face.

Twitter catalogs defining moments in history. Some of the most memorable moments in the World Cup happened on Twitter, in addition to those on the field, with 115 billion impressions during the tournament.

We see these types of moments everyday, to bring us together when we agree, and all too often divide us when we don't. But they inspire us to do better, and they provide the context for the actions we're taking to prioritize the long-term health of Twitter over near-term metrics.

We believe that Twitter's value as a daily service is enhanced when the conversation on the platform is healthier and people feel safe freely expressing themselves. During the second quarter, we launched new tools to address behaviors that distort and detract from the public conversation and introduced new measures to handle spam, malicious automation and platform manipulation.

We also acquired Smyte, a technology company that specializes in safety, spam and security issues to help us address these challenges faster. This is important work that complements what we're doing to connect people with interest and help them discover information. We've introduced new machine learning algorithms that organize the conversation around events and make it easier for people to find and follow topics, events and interests.

We're also making these experiences more accessible by surfacing them on the timeline, in Explore and in search results, as you likely saw during the World Cup. These types of product improvements are contributing to healthy daily active usage growth, which is 11% year-over-year during the second quarter. The momentum on the platform is translating into success with advertisers, with total revenue increasing 24% year-over-year in the second quarter. We're receiving positive feedback from customers about our efforts to enhance advertiser transparency and improve the health of the public conversation.

Earlier this month, Keith Weed, the Chief Marketing Officer of Unilever, the second largest advertiser in the world, publicly praised our efforts. Keith, who is named by Forbes as one of the world's most influential CMOs, tweeted, "Pleased to see Twitter taking a big stand against the fake followers polluting the digital ecosystem. Great step forward which strengthens the industry. I hope to see more following."

We're making progress, and we'll continue to invest heavily in making Twitter a healthier service because it's the right thing to do for Twitter as a platform, for the long-term health of our business and for society as a whole.

With that, I'll now turn it over to Krista for questions.

QUESTION AND ANSWER

Krista Bessinger, *Twitter, Inc. - Vice President, Investor Relations*

Great. Thanks, Jack. Chelsea, can you please poll for questions?

Lloyd Walmsley, *Deutsche Bank*

Thanks for taking my question, I have 2. Looking, I guess, just at Japan and the strength you're seeing there, can you give us a sense of maybe the extent to which there's unique aspects to the country, either on the user-related attributes side or perhaps the ad community side that is driving that success, and with a particular eye on maybe thinking through whether it may or may not be a good case study to employ in other geographies, and whether you feel like the strong growth there is sustainable? And then second one, maybe for Jack. You framed up in the shareholder letter the investment in security product as taking away from product development with the focus on audience growth. But wondering, is there a benefit that you get from improving the safety of the platform in terms of either better retention or audience growth? That would seem like that in and of itself helps improve the product in a meaningful way, but curious just to get your views there.

Ned Segal, Twitter, Inc. - CFO

Great. Thanks, Lloyd. It's Ned. I'll take the first question. On the strength in Japan, I think there's a few things to point to there. The first is on the audience side, we definitely learn things from Japan. There are some ways that are -- it's unique just like any country might have some unique aspects. But as we continue to build a global Twitter, we look to draw from one geography and bring that to another. So when we find great use cases or needs that help us broaden the ability to help people find what's happening or what people are talking about on Twitter, we build that for the whole world as opposed to for one geography. Bookmarks are a great example of that, where we saw a need for that, they came out of countries like Japan. 280 characters is another where you were able to say more in fewer characters in Japanese than you were able to in other languages, so we extended the character limit for other types of languages. There also are some unique things about the ad market in Japan. It's a more concentrated agency market. And I think our success recently has to do with both sides of the ledger, where we worked hard on audience and engagement and listened, but also where we have executed well on the agency side in this more concentrated market, and we're starting to see that bear fruit. We're pleased with our results in Japan. We're pleased more broadly internationally as well where we grew 44%. International is now over half of revenue, and we expect it to continue to grow faster than the U.S. even though the U.S. actually did accelerate this quarter from about 10% to 15% revenue growth.

Jack Dorsey Twitter, Inc. - CEO

And, hey, Lloyd, as you point out, we do believe that our health work and our focus on improving the health of the public conversation on Twitter is a growth vector over the long term. We want to make sure that we're building this into our DNA. We want to make sure that we are being -- we're able to measure it and held accountable to it as well. But one of the big reasons that we're doing it is, when we do focus on removing some of the burden of people reporting or blocking or muting, we do see positive results in our numbers. And it's still early. We have a lot more work to do, especially in applying machine learning and deep learning and newer models to recognize behavior on the network and shut it down early. We do believe, ultimately, over time, that this will help our growth story and encourage more people to stay with Twitter and also tell their friends, family and colleague about all the value they're getting out of it. It helps us with our job of helping to inform people about what's happening in the world. And the more we can do that, the more we can encourage people to participate in an active conversation. So over the long term, absolutely, and it's something that we're really focused on.

Heath Terry, Goldman Sachs

Ned, I was wondering if maybe you could give us a little bit more context around the MAU and DAU numbers this quarter. I know you talked about most of the accounts that were impacted by the information quality initiatives, being accounts that were never included in those numbers. But to the extent that there was an impact, is there any sort of like-for-like comparison that you can just sort of help us with to bridge this quarter? And then to the extent that these initiatives around information quality and the efforts around surfacing information through machine learning and AI are having an impact beyond just DAU growth and then actually are impacting either the minutes or some other measure of engagement around the amount of time that users are spending on Twitter, any insight that you could share into that would also be helpful.

Ned Segal, Twitter, Inc. - CFO

Great. Thanks, Heath. So a couple of things there. First, if you just look at the quarter and the impact that we saw from some of the work that we did, we mentioned in the letter that there was about a 3 million negative impact to MAU from the combination of our health works and decisions to not renew SMS contracts because there's a better way to provide Twitter to those users over time and GDPR. As we look ahead, and we just did the math on MAU, it was clear that our health initiatives were going to lead MAU to be down in the mid-single-digit millions from what we can tell today. So we thought it was worth sharing that. When we look -- if you just step back from MAU and you look at DAU, we're really pleased with the performance this past quarter, our seventh consecutive quarter of double-digit DAU growth, then we look at all 3 areas that we talked about in the past, organic growth, marketing and the ongoing and continued improvements in the product set as things that contributed to the year-over-year growth we saw. It was broad-based in 5 of our 10 largest markets as well. So definitely, still work to do on both, but pleased with our work to continue that usage of Twitter as a daily utility. You asked if the IQ work or the health work, as we like to call it, has impacted any of the usage metrics. When we look across the various metrics, we still

feel really good about how things are going on the engagement side. The idea of the work that we do on health, and we definitely see signs of it, is that it improves the public conversation on Twitter, and that's what the work is all about.

Ross Sandler, Barclays

Just 2 questions, Ned, on the advertising business. So trying to understand the trajectory for the second half of this year. You said there was \$30 million in the second quarter from the World Cup. So should we just net that out and then kind of look at the run rate in the low 20s for owned and operated as the right way to think about back half? Or any comments on the sequential growth rates for owned and operated? And then the second question is just on off Twitter ad revenue. It looked like if you strip out TellApart, that was kind of flattish and had grown pretty nicely last quarter. So any color on the trajectory we should expect for off Twitter in the back half?

Ned Segal, Twitter, Inc. - CFO

Thanks, Ross. So first, on the ads trajectory, we don't give revenue guidance. We did give EBITDA and EBITDA margin guidance, and we recognize folks will back into other parts of the P&L. When -- there's a couple of things that I wanted to speak to where you asked for more color. So we mentioned we had \$30 million of revenue from the World Cup in the second quarter. Remember, the World Cup spanned both the second and the third quarter. We actually had more games and more countries in the 2 weeks of the World Cup that happened in the second quarter. So you should assume that we have more revenue in the first 2 weeks than we had in the second 2 weeks, number one. Two, when you think about the World Cup more broadly, we were really pleased with the performance that we had, both in giving people a great experience on Twitter, we were able to showcase our events and topics infrastructure, and also on delivering for advertisers. But all that \$30 million isn't incremental. You could imagine some of it would be ads that would be showing on Twitter anyways in an environment where we're increasingly always on for advertisers, and some of it would be incremental as we have more of the conversation around the World Cup on Twitter than might be happening elsewhere that might have happened in the past. So I'll leave it to you on the sequential growth. And I had to think through that, but there's a little color for you to think about around the World Cup. Your second question was on the Twitter audience platform, so the off-network Twitter ads. And I think you backed into that, that might have been flat. That's just going to bounce around from one period to another, and we're always working hard to deliver for advertisers. And sometimes, you're going to see more of it show up on the platform. And other times, you're going to see it show up off-network.

Douglas Anmuth, JP Morgan

Just want to ask 2. First, just can you talk about how you're thinking about the progress in growing your advertiser base into the back half and in '19? And are you more focused in terms of kind of existing big brands, top 100? Or are you putting the investment dollars toward self-serve and programmatic more? And then secondly, can you just talk about the ad revenue deceleration internationally that we saw 1Q to 2Q? Anything specific to point out there?

Ned Segal, Twitter, Inc. - CFO

Thanks, Doug. So first, on the progress on the advertiser base, I'll just start by going back to October when the overall business in the third quarter had contracted, but the top 100 advertisers had grown. That was a sign that our strategy with the largest advertisers was really beginning to work, that they were seeing the ROI that they could get on Twitter, that the ad formats and better relevance were things that were really resonating with them. We have been taking that strategy where we've seen no success and both building on it with those largest advertisers, but also extending it to what we call the torso, which are the next hundreds of advertisers who either don't advertise very much on Twitter or don't advertise at all and should be advertising a lot because those same things that we're doing for the largest advertisers are things from which they can benefit as well. You asked about self-serve. That's an area where we know there's a big opportunity in front of us. There are millions of small businesses who are on Twitter, and local is such a great use case for all of us who use the platform. But we still haven't done enough work there on the engineering side to really deliver for those advertisers the way we probably can over time. We've talked about Twitter Promote Mode, which is our subscription service for them. We've seen early signs of success there. But there's definitely more work in front of us, and we'll have to prioritize it before

it will really gain the traction that it deserves. Right now, the work that we're doing on the ad platform side continues to be the work that benefits all advertisers, more relevance, better ad formats, et cetera. You asked about international. So international, decelerating off of a high base. We continue to see some real signs of strength there. But in some of the markets that we're growing off of really large numbers, the numbers just end up being a little bit smaller on a percentage basis, but on absolute basis, are becoming meaningful for us as international becomes more than half our revenue this past quarter. Our performance ad products and our China export market were really strong. We saw strength and growth in video in Japan, but we also saw strength in other markets that we're excited about, like the Middle East and North Africa, Brazil, France and Mexico. So there is still -- there's lots of opportunity in front of us internationally, and we think that, that will continue to grow faster than the U.S. in the near term as well.

Krista Bessinger, Twitter, Inc. - Vice President, Investor Relations
Rich Greenfield - Twitter User

Thanks. And we'll take the next question from Twitter. It comes from the account of Rich Greenfield, and he asks, "You cite that DAU to MAU ratio is still well below 50%. Why do you have so many light users? When you look back over the past year, what has been the biggest driver in improvement in that metric? And what is your strategy for the coming year to get towards 50%, if not higher?"

Jack Dorsey Twitter, Inc. - CEO

Hey, Rich, thanks for the question. So over the past year -- actually, the past 2 years, the biggest impact that we've had in getting people into heavier states of usage has been around relevance. So any time we add machine learning, deep learning models to the timeline to make the timeline and notifications a lot more relevant to people, where people can show up to the app and they immediately see something that's valuable to them, that they want to participate with in a conversation, they want to retweet to their followers, they want to like, we see benefit in our numbers. We have had to balance that over the past few months with our work on health. But generally, the more and more we focus on relevance, the more we see a positive impact on our numbers. And we do believe that we have a long, long way to go and a long roadmap ahead in terms of adding more relevance to both the timeline and notifications. But also, more broadly, we've been talking for some time about biasing more and more the service towards interest and topics. We decided to start with events, better organization around events that are happening right now. World Cup was our biggest scaled event that we've done. The amazing thing about this is we have a general infrastructure to deploy this to any event, whether it be the biggest like the World Cup or even small local news-breaking events, where we can organize the conversation around what's happening now, all the top experts or people on the ground, and a recap of what matters and what's most relevant for people who cannot catch the event live. So a lot of our focus over the next few months and years is going to be making sure that we can continue to organize the events experience in a relevant way, but then broadening it to longer-term topics. If you're interested in deep learning or bitcoin, you can find a community of conversation around it instantly and continue to participate on, which we believe will encourage a lot more participation and a lot more heavier states of usage.

Colin Sebastian, Robert W. Baird

I have a couple of questions. First, I was hoping you could frame the improvement in user engagements that you're generating from Happening Now and the other interest-based notifications, and how much of that might have been specifically related to the World Cup. And then on the expense side, with the sequential decline in EBITDA and the margin, just trying to segment out how much of the trend is specifically related to the shorter-term investments in health and GDPR versus some of the incremental costs of video content and infrastructure and normalized margin trends.

Jack Dorsey Twitter, Inc. - CEO

Thanks, Colin. I'll share some early data that we're seeing on the World Cup experience. And just as a reminder, we didn't do this as a one-off. We built in events infrastructure that we can deploy to small local events and global events like the World Cup. And one of the things that we saw, which we're really, really excited about, is people who access the World Cup experience and saw an organized conversation visited more often. So 39% engaged with 2 or more games, and over 22% engaged with 3 or more games. It's early data, but it gives us some insight into how to better organize the conversation to encourage more participation, more sharing, and how we might roll this out to more and more events all

over the world. And again, the goal here and the strategy here is to start with events, but to broaden out to more of enduring long-term topics and interests. We do believe that Twitter is more of an interest network than a social network. People come to it to figure out what's going on with a particular topic, a particular event, a particular interest, find a community of conversation around it and engage in it. So that is where the majority of our learning and our work is driving towards. And we're starting with the in-app experience, but that is going to extend throughout the app, including on-boarding, where we can match people with their interests and events they might care about much, much faster as soon as they get on, on the service. So we're seeing positive early signs, but a lot more learning and work to do.

Ned Segal, Twitter, Inc. - CFO

Hey, Colin, your second question was on EBITDA and margins and where the investment is going. So a few things to point out. The first is, there's no change to our thinking around priorities and areas of investment. We continue to prioritize in order: health, audience and engagement, the ad products and sales. We mentioned again this quarter that we expect to grow headcount 10% to 15% this year against those priorities. And we accumulate headcount and the expenses that go along with it over the course of the year, so that means that expenses ought to grow on a sequential basis in Q3 relative to Q2 as we continue to invest. We're really pleased with the margin improvement that we have continued to show. And as we think about the margin improvement that you'll see in 2018, it's obviously a bias towards the first half of the year where the significant margin improvement has already played out.

Mark Mahaney, RBC Capital Markets

In terms of the health work and removing malicious bad accounts, et cetera, can you -- what's your guesstimate as to how far along the path you are to doing what you need to do? I'm sure it's an ongoing project over the next several years. But do you have a feeling or belief that you just were able to cap a lot of that bad activity, inaccurate activity year-to-date? Or is there a reason to think that the size of the work ahead is just, in the second half, is just as great as it was in the first half?

Jack Dorsey Twitter, Inc. - CEO

Thanks, Mark. So we do -- as I said earlier, we do see health as a growth vector for us over the long term. And as you stated, we don't think that this work will necessarily ever be done. It doesn't have an endpoint. It's one of those things, like security or privacy, where you constantly have to evolve and constantly have to stay 10 steps ahead as you learn the dynamics of the network and get better and better. We've made some really meaningful progress and definitely moving faster than our expectations, but there's still a lot ahead. We made a major shift this year in shifting more of our model and our enforcement towards behavior and conduct on the network rather than content. That is entirely machine learning and deep learning driven. And that should give us an ability to move much, much faster at scale. We're starting to really get a discipline around integrating this into how we think about all of our work. So as we thought about building the events experience and deploying it to the World Cup, health was a big factor of this. So it's becoming more and more of our DNA and something that the teams are asking the right questions to start any particular project. So as that develops over time, I do believe that we can move in a much more rapid pace. And we're doing a bunch of moves right now that are more coarse grained to address and acknowledge a bunch of the things that we've seen for quite some time but weren't able to fully meet. But then it will be steady state, and we'll continue to push that work as fast as possible. But I am seeing a really good discipline, and the pace of innovation continues to rise.

Ned Segal, Twitter, Inc. - CFO

Hey, Mark, I imagine you're thinking about how to quantify those comments that Jack shared, and there are some things I'd point out to you. As we've talked about in other places, and it's in the letter so you can parse through it in more detail, it's important to think about how our health work can impact or not impact at all the disclosed metrics. So you've seen lots of reports over the last few weeks about tens of millions of accounts that we have removed at various timeframes. And remember, many of the accounts that we removed, most of them, in many situations, are inactive; that is they haven't been used for 30 days or more, so they are not in the disclosed metrics. Some of them never made it into the disclosed metrics because we're actually getting better at catching them at sign-up. And others will be in the disclosed metrics, and that's why we shared this morning that 3 million impact from the combination of health and GDPR and SMS and the likelihood for a single-digit million decline in the third quarter. So we'll continue to

keep you updated on it, but we'll just always be doing the right thing for the long-term health of the platform as opposed of thinking about the impact on the near-term metrics.

Eric J. Sheridan, UBS

Maybe following up on the cost dialogue from earlier. Can you help us understand, looking out over the next couple of years, how much of the investments being made in the business, whether it be on the opex or the capex side, are recurring and compounding in nature because they're sort of directed towards iteration and safety and security versus one-time in nature or maybe over a shorter period of time over the next 1 to 2 years sort of in a way to give investors a framework of what's being invested to pivot the platform versus sustained opex margins over the medium to long term? And then on engagement, maybe more for Jack. Love to understand how you continue to see -- what you continue to see in video as a stimulant for engagement on the platform? And what -- how do you strike the right balance on the curation side? And how much video takes up people's sort of experience on Twitter and where that can go over time?

Ned Segal, Twitter, Inc. - CFO

Thanks, Eric. Your first question is on margins, where the investments are going and the timeframe. We're focused on making investments for the long term and building a Twitter that can be here forever and that can serve the whole world. And so when we think about those things, like health and the audience and engagement and the ad products and sales, those are durable investments that we think about for very long timeframes, not ones that we think about for short bursts. When we think about how to allocate resources and when we might move people from one thing to another, that certainly could happen inside of a period or over quarters or years, but that would affect our margins less so than the long-term thinking, but there's no change to our thinking on the long-term margin profile of the business. We continue to think that our business can have a similar margin profile as others like ours, in the 40% to 45% range, and we demonstrated the ability to do that in the fourth quarter. We just have to balance the ability to demonstrate those margins in any period with the investment opportunities that we see to build a Twitter for the long term that can serve more people than it does today and deliver value for all our stakeholders over time.

Jack Dorsey Twitter, Inc. - CEO

And our strength is conversation and video has always been a great conversation piece. So any time we have video on the platform or within our live experiences, it continues to enrich the conversation. We're building into this quite heavily. We released some time ago the ability for anyone to clip a live video and share it with their followers, their friends, to have a conversation around a particular aspect of what they saw during an event, which creates a lot more network effects and dynamics to get more people into the event, to get more people into the video stream. So it's something that we're watching really closely, excited about the growth. And in terms of curation over time, we're always looking for opportunities to match conversations already happening on Twitter with really great video content, whether it be live or prerecorded. And we see more and more of those all the time. Now that we do have a generalized event infrastructure that we've tested at scale with the World Cup, it allows us to move much faster and deploy those videos and match that with the conversation in a much more relevant and faster way. So we're excited about where we are today with video, but there's a lot more ahead of us that we're excited to do to help people get more into the video and get more out of the conversation.

Justin Post, BofA Merrill Lynch

Just a couple here. First, we didn't notice Twitter had an announcement at Google's Cloud Conference, and it looks like you might have some adoption there. Could that be a long-term cost savings? And how are you thinking about moving some infrastructure to the cloud? And then secondly, just looking out to Q4, I know the World Cup was helpful, but I appreciate you framing and providing that additional disclosure, are there any events or comps we should be thinking about as we do our Q4 models?

Ned Segal, Twitter, Inc. - CFO

Thanks for the questions, Justin. First, on Google cloud, our CTO did present at Next -- this week. We have moved some workloads over to GCP. We're always thinking of the best way to deliver Twitter and the best way to deliver a great experience for our engineers who are working hard to make Twitter even

better every day. And so we'll continue to balance the work that we do on our own data centers. You saw some significant CapEx investments this quarter where we invested \$200 million, a lot of it in a tech refresh that we did in our own data centers with the opportunities to use Google cloud or other platforms to, again, deliver Twitter or to deliver a great experience to our engineers. So we'll just carefully balance those over time. And it's all incorporated into the margin guidance, the EBITDA guidance and the CapEx guidance that we gave. I wouldn't point you to any change in long-term trends there from what you heard from Parag on stage this week. And your second question was around events that are coming up in the future. We broke out the World Cup, which happened in Q3 -- in Q2 and in Q3, and we gave you some granularity around Q2 to help you around what is a pretty large event for us. But if you take a step back and you think about a global Twitter and all the things that are happening all around the world, there are midterm elections later in the year, there are elections all over the world, they're happening, but at this point, there are events happening all over the world all the time on Twitter. And it's our job to make those a great experience for our audience so that they come to Twitter more often and they stay longer when they come and to deliver for advertisers in a way that they want to continue to invest in the platform as opposed to just around those events. So I don't think there's anything in particular that we'd point you to

John Blackledge, Cowen and Company

Two questions. One on engagement. So the DAU growth has been strong now for almost 2 years. Just wondering if you can talk about the change in time spent year-over-year for daily users in the second quarter. Any color there? And then the second question would be kind of how do you view the attractiveness of the platform for direct response advertisers relative to peers? Any changes or tweaks you're doing there? And are you seeing more DR advertisers that are coming to the platform?

Ned Segal, Twitter, Inc. - CFO

Thanks, John. I'll take the first, and Jack will take the second one. So when we look at engagement, we look at a number of metrics. And certainly, it's hard to boil it up to one for you, but we continue to be pleased with the trends around engagement. Jack gave some great anecdotes around the World Cup and how we saw people continue to come back and use it to do events infrastructure that we laid out, but there's nothing new to report there.

Jack Dorsey Twitter, Inc. - CEO

We had another strong quarter for direct response. We're thinking about this on a slightly different way. We're trying to bring and blend together performance and brand. The best example of this is our Video Website Card, so we can create a product that can be very performant in a really short amount of time, which I think speaks to our increased discipline and the ability to understand what the market needs and what our advertisers need and move very fast on an opportunity. The Video Website Card for us has driven a lot better ROI for advertisers across all parts of the funnel. The upper funnel, on brands and video impressions; in the lower funnel, DR and call to actions. So we're looking for opportunities to do something new within DR, and Video Website Card is a great example of that.

Anthony DiClemente, Evercore ISI

A lot of the questions have been covered, but I have a couple of specific follow-ups. First, on CapEx, Ned, I noticed the CapEx guidance went up, I think, \$450 million to \$500 million, up from \$300 million to \$400 million. Can you just talk a little more about what's specifically driving that? Is it increased infrastructure investment? Is it some of the health initiatives? Is it servers? And then a follow-up also on the World Cup, thank you both. Ned, you helped us with the \$30 million revenue benefit; Jack, the machine learning to organize around events. But I just -- if you could specifically, what was the benefit to audience from the World Cup? Can you quantify that in some way for us in terms of DAU or MAU just as we look out to expectations for DAU and MAU growth coming out of the World Cup in the 3Q and in the 4Q?

Ned Segal, Twitter, Inc. - CFO

Thanks, Anthony. I'll take both. First, on CapEx. Just to clarify, the guidance may change from \$375 million to \$450 million, to \$450 million to \$500 million, just to make sure we've all got this. But when you dig deep on it, I want to point out a couple of things. The first is that, remember, we've mentioned this for a couple of quarters now, we got some gear in December for which we said the check in January consistent with the payment terms, but not consistent with making it easy for you on a year-over-year compare basis. And so when you move that \$45 million from January to December, which I do when I

think about what the real trend is in our CapEx, you get it to more like 25% to 40% year-over-year growth, as opposed to what looks a lot bigger. Having said that, we did do a big tech refresh in the second quarter. We spent \$200 million, give or take, on CapEx. It tends to be more efficient to do more of it at once than it does to spread it out in a way that might look better in an analyst's financial model, but doesn't work as well in the data center. We continue to invest both in the infrastructure to deliver Twitter in the infrastructure for our engineers and then in the infrastructure to continue to grow headcount 10% to 15% this year. So it just ends up, when you tunnel up, it's going to be a little bit more than we had anticipated when we began the year. Your second question was around the World Cup and the events and whether you can see how that's impacting audience and engagement. We look at the World Cup as a great example of something where it's just our job to take advantage of that, to give people a great experience on Twitter, to have them come back in the ways that Jack described and for that to become a durable experience for them, not something that's just about that one event. We're pleased with the work that we did this quarter. But when we look out across all the different quarters and all the events that are happening all around the world, we don't tend to break out a particular event when we think about its impact on audience and engagement because there are so many of them over the course of the year all around the world.

Mark May, Citigroup

The reasons why the health initiatives would impact MAUs are pretty clear to me. But just curious, what, if any, impact there may be near term on revenue? And then just circling back on an earlier question, wondering if you could comment a bit on the durability of the recent strong growth you've seen in Japan.

Ned Segal, Twitter, Inc. - CFO

Great. Two good questions, Mark. On health, so it impacts MAU, impacts DAU less and, over time, the right thing to do for the platform. We actually -- we don't really see impact on revenue from this. In fact, the impact on revenue ends up being pretty constructive because advertisers embrace the work that we're doing. They talk about it on the platform. They talk about it when we meet with them. And they vote with their dollars, and they're continuing to invest more on our platform because of the better ROIs that they're getting, because of the increased relevance we're able to deliver to them and because they recognize that a healthier Twitter as opposed to a disclosed metric is what's going to deliver a great result for them on the platform. So no impacts to revenue, glad you asked the question. Your second question was around sustainability of growth in Japan. So we've seen some pretty consistent growth in Japan at pretty high levels. We're thrilled by the performance of our team there and of how we've been able to deliver both for the people who use the platform and for advertisers there. We don't forecast or guide by country, but we feel really good about what we're doing there, and we're working hard to make it continue.

Brian Nowak, Morgan Stanley

I have 2. Just the first one, Jack, you've done a lot of great work around machine learning and improving the on-boarding process with personalization and curation. Just curious if you could share just sort of any tangible positive results you're seeing around that and what gives you confidence the initiatives are working to drive faster overall user growth. And the second one is a jump-ball for either of you guys. As you look into 2019 on the advertising business, how important is growing users among the advertisers to really grow their overall spend on the platform? Or do you think you can grow meaningfully without growing the user base next year?

Jack Dorsey Twitter, Inc. - CEO

Thanks for the question, Brian. So on the machine learning and deep learning, we have gone a lot better at applying this more and more places around the service. The majority of our focus has actually been on the timeline and notifications, and we are seeing some really positive results from that. Our focus on making sure that we're building something that people want to engage with daily is working and where people spend the majority of their time is the timeline, in notifications and Explore when they exhaust their timeline. We haven't applied as much to on-boarding, so that is a huge opportunity for us going forward. And as I said earlier, where we're biasing more and more the service is towards interest and topics and events. So the more time we spend on really looking at what's happening in on-boarding, making sure that when people come to the service on the web or download the app, they can immediately get into

whatever they're interested in, get into a conversation, see the experts within any particular field, topic, interest or event, watch a conversation unfold and ideally participate in it. We think there will be a lot of positive results from that. But to be honest, we haven't spent as much time yet on the on-boarding flow. In particular, we've been focused on people in the service today and looking for opportunities to further engage and make sure that what we're delivering to them is much more relevant. They don't have to do as much work to dig through tweets to find something that matters and something they want to engage with. So on-boarding remains a massive opportunity for us and something we are going to focus more and more of our attention on going forward now.

Ned Segal, *Twitter, Inc.* - CFO

Brian, I'll take the jump-ball. As we look ahead, it's good to step back and look at the last couple of quarters, where we grew revenue in excess of audience. If you think back a year or so ago, we've mentioned that our revenue would lag audience, and it turned out to be the case. And as we have continued to work hard on our ad platform, on better ad formats and driving better relevance, which has led to ad engagements up 81% this quarter and improving CTMs, we feel really good about the work that we're doing. And we do think that there are a number of ways that we continue to -- that we can continue to grow revenue in excess of ads -- I'm sorry, in excess of audience. A lot of that work are on the ad platforms, a good example. Our data business is another great example, but as is MoPub. Having said that, over time, we -- our mission is to deliver a great experience on Twitter to as many people in the world as we can. And we still have lots of work to do there. And we recognize that that's going to be the lifeblood of growth for the business over longer periods of time. But we still see lots of ways that we can grow revenue in excess of audience in the near term.

Ned Segal, *Twitter, Inc.* - CFO

Great. Thank you. Our results demonstrate the positive impacts of our efforts to drive engagement while delivering for advertisers. We're continuing to improve the health of the public conversation on Twitter. We're maintaining profitability, while we invest in the business. And we're making it easier for people to follow events, topics and interest. We look forward to sharing additional updates on our progress next quarter. We'll hold our Q3 call on October 25 before the market open. Thank you all for your support, and we'll see you on Twitter.