

Operator

Good afternoon. My name is Mike, and I will be your conference operator today. At this time, I would like to welcome everyone to the Facebook Fourth Quarter and Full Year 2018 Results Earnings Conference Call. [Operator Instructions]. This call will be recorded. Thank you very much.

Ms. Deborah Crawford, Facebook's Vice President of Investor Relations, you may begin.

Deborah Crawford

Thank you. Good afternoon, and welcome to Facebook's Fourth Quarter 2018 Earnings Conference Call. Joining me today to discuss our results are Mark Zuckerberg, CEO; Sheryl Sandberg, COO; and Dave Wehner, CFO.

Before we get started, I would like to take this opportunity to remind you that our remarks today will include forward-looking statements. Actual results may differ materially from those contemplated by these forward-looking statements. Factors that could cause these results to differ materially are set forth in today's press release and in our quarterly report on Form 10-Q filed with the SEC. Any forward-looking statements that we make on this call are based on assumptions as of today, and we undertake no obligation to update these statements as a result of new information or future events.

During this call, we may present both GAAP and non-GAAP financial measures. A reconciliation of GAAP to non-GAAP measures is included in today's earnings press release. The press release and an accompanying investor presentation are available on our website at investor.fb.com.

And now, I'd like to turn the call over to Mark.

Mark Zuckerberg

Thanks, Deborah, and thank you, all, for joining us today. Our community continues to grow, and our business delivered good results this quarter. There are now 2.7 billion people using Facebook, Instagram, WhatsApp or Messenger each month and more than 2 billion people who use at least one of our services every day.

On our last call, I talked about our overall strategy as we faced some important opportunities and challenges. And today, I want to give you an update and talk about our priorities for 2019. For the past couple of years, most of our focus and energy has gone into addressing some of the biggest social issues around the future of the Internet, including election integrity,

content governance, safety and security, data privacy and digital well-being. And these are all complex issues but we've made real progress. In many of these areas, we believe we built the most advanced systems in the world and, in many cases, more advanced than any other company or government. And in other areas, we have clear road maps now for our work ahead.

Still, there's a lot more to do, and I expect it will take strong execution through 2019 and beyond before we get all our systems to the level that we need. But we've fundamentally changed how we run this company. We've changed how we build services to focus more on preventing harm. We've invested billions of dollars in security, which has affected our profitability. We've taken steps that reduced engagement in WhatsApp to stop misinformation and reduced viral videos in Facebook by more than 50 million hours a day to improve well-being. We've made significant progress and we're going to continue this work, but we're also going to allocate more of our energy to building new and inspiring ways to help people connect and build community.

Going into 2019, we're focused on four priorities: first, continue making progress on the major social issues facing the Internet and our company; second, build new experiences that meaningfully improve people's lives today and set the stage for even bigger improvements in the future; third, keep building our business by supporting the millions of businesses, mostly small businesses, that rely on our services to grow and create jobs; then fourth, communicate more transparently about what we're doing and the role our services play in the world. And I want to take a minute talk about each of these.

So first, continue making progress on the major social issues. The most important work here is to keep executing our road map to build systems that can proactively identify harmful content so we can act on it sooner. We just finished a year of very heavy investment to get these systems to a better place, and we've seen the results of that in recent elections, including the U.S. midterms and in our transparency reports, where we report what percent of violating content we identified proactively. We ended 2018 with more than 30,000 people working on safety and security, up from 10,000 people a couple of years ago. And this work will never be finished, but I now believe we've built some of the most advanced systems in the world for dealing with these issues.

Now however, this raises a broader set of values questions about how to use these systems. One question is about who decides what speech is acceptable and what isn't. Right now, we have a deliberative process of consulting with experts around the world. But I've increasingly come to believe that we

shouldn't be making so many of these decisions about content ourselves. In November, I wrote a note about a blueprint for a system of content governance and enforcement, which includes giving people the ability to appeal our internal content decisions to an independent body, and we're currently working with experts to design the system and we plan to start piloting it this half.

Another important issue is the future of privacy and encryption. People really value the privacy that encrypted messaging brings and we've built the most secure global messaging service in the world. As people increasingly share more privately, we're working on making more of our products end-to-end encrypted by default and making more of our products ephemeral so your information doesn't stick around forever. And I'll discuss this more over the coming quarters.

Our second priority for 2019 is that as we make progress on these social issues, we also need to deliver new experiences that meaningfully improve people's lives. Now, I'm not talking about the many day-to-day iterative improvements we make so that ranking gets a bit better or that things get a little faster, but I'm talking about major improvements to people's lives that whole communities recognize and say, "Wow, we're all doing something new on Facebook or on WhatsApp that we weren't doing before." The last experience like this was Stories, which continues to grow very quickly. For example, Instagram just passed 500 million daily actives on Stories. But the reality is, we've put most of our energy into security over the past 18 months, so that building new experiences wasn't the priority over that period. So this year, I think we're going to deliver several of these new experiences.

Messaging is an area that's growing the most quickly. And this year, people are going to feel these apps becoming the center of their social experience in more ways. We're going to roll out Payments on WhatsApp in some more countries. Private sharing in Groups and Stories will become more central to the experience. We're going to onboard millions of more businesses that people can interact with.

In Facebook, the way people experience groups and communities will continue to deepen. We're going to get to a point soon where people feel like Facebook is about as communities as it - is about communities as much as it's about your friends and family where almost everyone is in a group that's meaningful to them and that community is a central part of their experience. On Facebook, I also expect this to be the year where Watch becomes more mainstream. There are now 400 million people who use it every month, and people, on average, spend over 20 minutes on Watch daily. This means we're finding ways for video to grow outside of News Feed so it doesn't

displace the social interactions that people primarily come to our services for.

In Instagram, one of the areas I'm most excited about this year is commerce and shopping. There's a lot of natural activity happening here. And this year, I expect us to deliver some qualitatively new experiences around that. Longer term, I remain very focused on building technology that brings people together in new ways, including through AR and VR. I'm looking forward to Oculus Quest shipping this spring. The feedback there so far has been very positive. And I've also been positively surprised that Portal has done better than I expected it to. I love using it with my own family. But we never shipped Facebook-branded hardware before and a lot of people said this would be a difficult time to start. So I'm pleased that so many people are enjoying this experience of being able to feel closer to the people they care about even when they're physically far apart.

Our third priority is to continue strong execution on our business. In the past couple of years, a lot of our business challenges have been self-imposed. The reality is that we've had a number of substantive issues that we needed to address, and the investments we made in safety, security, privacy and well-being both increased our costs and, in some cases, reduced our revenues. But as I said at the time, I believe that these investments are the right thing to do and will make our community and our business stronger over the long term. And what we've seen is that the fundamentals of the business remain strong. More than 90 million small businesses now use our products, the vast majority of them for free. And of those we surveyed, half tell us that they've been able to grow their businesses and hire more people since joining Facebook. This means they're using our services to create millions of jobs, and this is one of the most important contributions that we feel we can make to the world. And to put this in perspective, the U.S. economy added about 2.6 million jobs last year.

Our last priority is to get out there more and make the case for the role our services play in the world. Right now, there's a lot of negativity about the impact of technology, and some of it's fair and some of it's misplaced. And we, in the tech industry overall, should be scrutinized heavily because we play a role in many people's lives. My approach here is to listen to the critique first, to work on addressing our issues, figure out what we believe are the most important principles to uphold and then go engage in the debate. And I feel like we've come out of 2018 not only making real progress on important issues but having a clear sense of what we believe are the right ways to move forward. Now, we're still going to make mistakes along the way, but we now have a clearer sense of the path ahead and we're ready to work with people to understand our role and move towards good outcomes, whether that's regulation on content or data, cooperation on

shared threats, working openly to make sure AI best serves people, or just standing up for the kind of open and connected world that we all want to see.

The Internet is a massive force for change and we're at the center of a lot of the debate that brings, but our core value to people and society remains the same. We offer a service free to everyone to help you stay connected with the people you care about, express what you're thinking and feeling, get help when you need it most, support the causes and ideas you believe in, start and grow businesses no matter where you are, and that makes a lot of good possible and we're committed to building technology that people can use to create positive change.

As always, thank you for being on this journey with us. And now, here is Sheryl to talk about our business.

Sheryl Sandberg

Thanks, Mark, and hi, everyone. We had a strong fourth quarter and a good end to the year. Q4 mobile ad revenue was \$15.5 billion, increasing 36% year-over-year and contributing approximately 93% of our total ad revenue. Full year mobile ad revenue grew 45% compared to 2017. 2018 was a challenging and important year for us. As Mark said, we made significant investments in safety and security and strengthened our defenses against election interference. We gave people tools to better control their information and set a new standard for transparency and ads. We have focused on making progress in these important areas while continuing to grow our community and our business. This quarter proved that we can do both.

We know we still have a lot of hard work ahead of us. We need to continue to do better at anticipating the risks that come from connecting so many people, and we need to earn back people's trust not with words alone but with actions. Part of building trust is helping people better understand our business model. Protecting people's privacy and showing them relevant ads are not at odds. We don't sell your data and we don't tell advertisers who you are. What we do is allow advertisers to reach people interested in their products. The result is that people see more relevant ads and small businesses can reach people in ways that only big companies previously could. This business model keeps Facebook free so people all around the world can use it and levels the playing field for businesses of all sizes while protecting people's privacy.

I'm excited to announce today that we have more than 7 million active advertisers across our services. From local shops to global brands,

companies all over the world are growing and hiring because they can reach their customers on our platform. The opportunities we create for businesses drive our growth, which continues to be broad-based across regions, marketer segments and verticals. During the holidays, companies used our ads to help people discover deals and find gifts. We saw particular strength among advertisers that optimized for measurable objectives, like conversions or sales. For example, Bryan Anthony's an online jewelry store based in Austin, Texas, used our campaign budget optimization to bring in new customers and sales on Black Friday. The campaign was so successful that they tripled their holiday purchases and hired additional people to help pack and ship orders for the busy season.

We're also helping advertisers keep up with shifts in how people use technology. People are creating more Stories and sending more messages, which means these are emerging areas of opportunity for marketers. Today, we're also announcing that 2 million advertisers are using Stories to reach customers across our family of apps. We're making it easier for advertisers to adopt their campaigns for Stories. In Q4, we expanded automatic placements, which converts feed ads into a format that works for Stories and delivers ads wherever they'll get the best results. Framebridge, a start-up that provides custom picture framing, recently used automatic placements to run ads across Instagram Stories, Facebook and Instagram feed. They ran short videos to show that their frames make great holiday gifts, and Instagram Stories generated over 25% of their new customer sales.

As people increasingly use messaging apps, we're helping small businesses make that shift, too. In Q4, we launched ads in Messenger Stories, which means advertisers can now easily buy Stories ads across Facebook, Instagram and Messenger. Beyond Stories and messaging, we have an opportunity to connect people and businesses on new services like Marketplace. We're seeing good early results at Marketplace ads. In Q4, we worked on making ads more relevant to the products that people are looking for. For example, if someone is browsing furniture in Marketplace, we'll try to show them an ad for furniture or a related item. We plan to keep working on this to provide a better experience for people and more value to advertisers over time.

As we build new ad products, we remain focused on improving the overall quality of our ads. Across all of our platforms and formats, we're investing in AI to make ads more relevant and effective. In Q4, we developed new AI ranking models to help people see ads they're more likely to be interested in. We're also using AI to identify and more quickly review ads that might violate our policies, which was particularly important during the U.S. midterm elections. Looking ahead, we see more opportunities to use AI to keep people safe on Facebook and help businesses grow.

I want to close by saying thank you to the businesses around the world who are using our tools to create jobs and growth. Last month, I went to Facebook's Community Boost in my hometown of Miami, which was the 50th stop on our tour across the U.S. in 2018, offering digital skills training to small businesses and job seekers. I met entrepreneurs like Alex Kassab. He started Morelia Gourmet Paletas with friends just two years ago. He says that 60% of his new customers learned about their ice cream from Facebook and Instagram. And because of this growth, they've expanded to 12 locations and hired more than 35 people. Last week, I was in Europe and met with SMEs from across the continent who shared similar stories of growing their companies, hiring people and investing in their communities. These stories motivate us to keep improving so more people can succeed on our platform.

I also want to thank our global team for their commitment to tackling our issues and making our products better every single day. As we come out of a challenging year and continue to face challenges ahead, I believe we're in a position to build on the progress we've made and better serve our community in 2019. I am grateful to all of you for your continued hard work and dedication.

Now, here's Dave.

David Wehner

Thanks, Sheryl, and good afternoon, everyone. Q4 was a strong quarter wrapping up a good year for our business. Full year 2018 revenue grew 37% to \$56 billion, and we generated over \$15 billion of free cash flow. Let's begin with our community metrics. Daily active users on Facebook reached 1.52 billion, up 9% compared to 2017, led by growth in India, Indonesia and the Philippines. This number represents approximately 66% of the 2.32 billion monthly active users in Q4. MAUs grew 191 million or 9% compared to last year.

Turning to our overall family metrics. Around 2.7 billion people worldwide used one of our applications in December, and on average, over 2 billion people were active daily. This is our best estimate of our de-duplicated audience across Facebook, Instagram, Messenger and WhatsApp. We believe these numbers better reflect the size of our community and the fact that many people are using more than one of our services. For the time being, we will continue to disclose both set of numbers. But over time, we expect family metrics will play the primary role in how we talk about our company and we will eventually phase out Facebook-only community metrics.

Turning now to the financials. All comparisons are on a year-over-year basis unless otherwise noted. Q4 total revenue was \$16.9 billion, up 30% or 33% on a constant currency basis. Had foreign exchange rates remained constant with Q4 '17, total revenue would have been approximately \$348 million higher. Q4 total ad revenue was \$16.6 billion, up 30% or 33% on a constant currency basis. In terms of regional ad revenue growth, Asia Pacific was strongest at 34%, followed by North America at 31% and Europe at 28%. Rest of World ad revenue grew 24% and was impacted by ongoing currency weakness and macroeconomic challenges. In Q4, the average price per ad decreased 2% and the number of ad impressions served on our services increased 34%. Impression growth was primarily driven by ads on Instagram, including both feed and Stories as well as Facebook mobile News Feed. The year-over-year decline in average price per ad reflects an ongoing mix shift towards product services and geographies that monetize at lower rates. Payments and other fees revenue was \$274 million, up 42%. Sales of Oculus Go and the launch of Portal contributed to the revenue growth in the quarter.

Turning now to expenses. Total expenses were \$9.1 billion, up over \$1 billion sequentially and up 62% compared to last year. In addition to continued investment in infrastructure, safety and security and innovation, expenses were also driven by seasonal factors, including marketing efforts, notably the promotion of Portal and Oculus Go. We ended the year with over 35,500 full-time employees, a 42% increase.

Operating income was \$7.8 billion, representing a 46% operating margin. Our Q4 tax rate was 14%. Net income was \$6.9 billion or \$2.38 per share. Full year capital expenditures for 2018 were \$13.9 billion, driven by investments in data centers, servers, network infrastructure and office buildings. We generated \$3.3 billion in free cash flow in Q4 and ended the year with approximately \$41 billion in cash and investments.

In Q4, we bought back approximately \$3.5 billion of our Class A common stock and completed our prior repurchase authorization. In December, our Board of Directors authorized the repurchase of an additional \$9 billion of stock.

Turning now to the revenue outlook. In Q1, we expect our total revenue growth rate to decelerate by a mid-single-digit percentage on a constant currency basis compared to the Q4 rate. We also expect that our revenue growth rates will continue to decelerate sequentially throughout 2019 on a constant currency basis.

Turning now to the expense outlook. On a full year basis, we continue to expect 2019 total expenses will grow approximately 40% to 50% compared

to 2018. Our 2019 capital expenditure outlook is unchanged at \$18 billion to \$20 billion, driven primarily by our continued large investment in building data centers.

Lastly, we expect that our 2019 tax rate will be a few percentage points higher than our 2018 rate. In conclusion, we are confident in our ability to continue to invest effectively in the key priorities that Mark outlined in his opening remarks: making progress on the major social issues facing the Internet, building new experiences that meaningfully improve people's lives, and growing our business by supporting the many businesses that rely on our services.

With that, operator, let's open up the call for questions.

Question-and-Answer Session

Operator

[Operator Instructions]. Your first question comes from the line of Brian Nowak from Morgan Stanley.

Brian Nowak

I have two, the first one for Dave. Last quarter, you talked about an expected sequential deceleration in 4Q rather, and I think it came in a little better than expected. Could you just talk to sort of which forms of media, whether it's News Feed or Stories or Instagram, kind of came in better than you thought it originally would a few months ago and what drove the upside? And then, Mark, you talked about the Instagram commerce opportunity. Maybe just talk us through sort of 1 or 2 of the key - what you think are the most important steps you have to cross throughout 2019 to really execute on this opportunity.

David Wehner

Sure. Thanks, Brian. I'll take the first part of your question. Yes, Q4 was very strong on revenues, so we're pleased with that. On the demand front, we continued to benefit from advertisers targeting on business results. So direct response was especially strong during the holiday season. And then on the supply front, we benefited from strong Instagram growth, which was aided by both growth in impressions on Instagram feed and on Stories. But I'd reiterate that we expect that we will see a deceleration of revenue growth in Q1.

Mark Zuckerberg

I'd like to talk about - a bit about commerce. When I think about it, just from the consumer side, increasing commerce on Instagram, Facebook and WhatsApp, I think, is one of the most exciting product opportunities that we have in all of these products and a big business opportunity as well. The big things that I think we want to make sure that we nail, in Instagram especially, are discovery. People are already doing a lot of commerce activity and are really interested in following brands, and I think making sure that, that works is - and does well is a big deal. But I think there's also a very big opportunity in basically enabling the transactions and making it so that the buying experience is good and that when you buy from someone - from a seller that you know that you can trust them, that you're going to have a good experience and in facilitating and making that go well. The work that we're going to do in Instagram also will go across the efforts in Marketplace and Facebook, the work - the rest of work that we're doing in Facebook and all the work that we're going to be doing in WhatsApp as well. So this is a big area that I'm personally very excited about and focused on.

Operator

Your next question comes from the line of Anthony DiClemente from Evercore.

Anthony DiClemente

Maybe, first, for Sheryl on Stories. Stories continues to grow very quickly. As you said, the number of advertising - advertisers using Stories are growing quickly. Can you give us a little bit more on the performance of the ads? Are you seeing improvements in conversion rates for those ads? Are the ads performance on Stories narrowing the gap with feed ads in terms of pricing or performance? And anything broadly on demand for those ad formats. And then one for Mark. I wonder if you could speak to the possibility of stitching together the messaging apps, WhatsApp, Instagram, Messenger. It would be great to hear what the rationale or potential commercial benefits might be to - or for potential integration of those properties.

Sheryl Sandberg

I'll take the Stories question. One of the challenges that marketers have is keeping up where consumers are. If you think about our history, people made the shift to mobile before marketers did, and I think one of the successes we've had is we made it easier for advertisers to move into a mobile environment. And just as we did that in mobile, now we're very focused on doing that in the new things that people are doing, and Stories is a big part of that, Messaging will be further out, but as important as well. So I think the fact that we've already gotten 2 million advertisers to move into

Stories is because we've gotten better at making it easier. We launched our automatic placements and expanded it, which converts feed ads into a format that works for Stories and delivers the ads wherever they'll get the best results. So our goal is to make it as easy as possible for marketers to get to the format of Stories and then deliver the ads where they're going to get the best experience and the best ROI. Now right now, one of the interesting things about Stories is there's a benefit to being an early adopter. So the pricing is really attractive. And so we think the mix shift to Stories is a big opportunity for us and it's going to take time to continue to get advertisers in, but we're very happy with demand to date.

David Wehner

I would just - before we turn to Mark, I'd just layer in on the Stories front. When we look into 2019, we do expect to see a deceleration of revenue growth throughout the year. And while we have opportunities to grow impressions on Facebook and Instagram, that's less so in feed, where we already have healthy ad loads in - on both surfaces and more in Stories where we have lower CPMs. So - whereas in 2018, we benefited from strong impressions growth on Instagram in both feed and Stories. We'll be more reliant on Stories impression growth in 2019. And from a pricing perspective, there's - we've got to improve our ability to grow the number of advertisers using Stories and improve price there, but it's going to be more reliant on that in terms of revenue growth.

Mark Zuckerberg

All right. I can talk about messaging and the integration that we're thinking about, but first, we're really early in thinking through this. So there's a lot more that we need to figure out before we finalize the plans. And then, of course, this is going to be a long-term project that I think will probably be to whatever extent we end up doing it in - a 2020 thing or beyond. There are a few big reasons why I'm excited about this and think it'll be good for the user experience, which is the reason that we're doing it. I mean, part of the question was about a commercial benefit, but that really isn't the big focus here. The first reason that I'm excited about this is moving more to end-to-end encryption by default in more of our products. People really like this in WhatsApp. I think it's the direction that we should be going in with more things in the future. And I think if there's an opportunity to use the work that we've done with WhatsApp there, rather than doing it in different ways in the different messaging experiences, to have that really just - to have encryption work in a consistent way across the different things that we're doing. There are also a number of cases that we see where people tell us that they want to be able to message across the different services.

So one example is a lot of people, hundreds of millions of people, are using Marketplace on Facebook now, and a lot of people are using that in countries where WhatsApp is the primary messaging app that they use. So we have these experiences today where we're building Marketplace and you go to message someone to buy something. And the link to basically do the messaging is over Messenger, but in that country, where people really want to be using it, is WhatsApp and we need to make it so that people can communicate across the different networks and graphs that they have or be able to do that integration better in order to facilitate more transactions and connections there. Another example is there are tens of millions of people, maybe more, but I'll go with that, who, on Android, use Messenger as not only their app for Facebook messaging but also for SMS, as their SMS client. And going back to the encryption point from before, we think that there's an opportunity to, when you're going to go message someone over a phone number network, have that primarily go over WhatsApp and be end-to-end encrypted rather than go over SMS where it's unencrypted and less secure. So I can give you a few more examples like that, but I guess the way that I'm thinking about this is that there's a handful of cases that people are telling us that they want to be able to integrate and communicate more easily across the networks. I think moving more towards end-to-end encryption and improving security there is the right direction to go in. There's a lot of questions there that we need to work through. So we're working through this in a deliberative way. And I wouldn't expect anything here to launch soon, but this is definitely something that we're thinking about and that I think will improve the user experience.

Operator

Your next question comes from the line of Eric Sheridan from UBS.

Eric Sheridan

Two, if I could. One, Mark, on Facebook Watch, what do you think are some of the things you're still trying to solve for on either the content side or the consumer engagement side to drive broader adoption of Watch and turning it into sort of the mechanism for customers that you're trying to solve for over the medium to long term? I'd love to understand how you see the opportunity and the challenge that's just in front of the company. And second, there was a fair bit of noise in the advertising community about the macro environment at the end of 2018 and maybe at the beginning of 2019 with things like Brexit and the government shutdown in the U.S. Are you seeing anything on the macro front in your own business either exiting 2018 or should start in this year?

David Wehner

Yes, I can...

Mark Zuckerberg

Take that first one and then I'll...

David Wehner

Yes, I can start on the macro environment, Eric. Obviously, we delivered strong results in Q4. As we look out into 2019 further, that's - the macro economy is certainly a potential headwind and risk to the business just given the sensitivity of the advertising business to a slowdown in growth.

Obviously, we believe we've got the best advertising products out there in terms of being able to deliver measurable business results to clients. And so we think that does help us in that environment, but clearly, macroeconomics stands out there as a risk on top of other issues that we face, leading to a deceleration of revenue growth in 2019.

Mark Zuckerberg

I'll talk about Watch and video. So there, we've really had this dynamic over the last 12 to 18 months where we've limited the amount of video that we've shown in order to make sure - in News Feed, to make sure that it doesn't displace interactions, social interactions that people are having. And the big thing that unlocked a lot of growth in Watch is we basically were able to move a bunch of the video-watching behavior to a different tab, where people intentionally go to the tab because they want to watch a video and browse and see what's going on. And that has allowed us to really increase the amount of video that people are watching without getting in the way of the core mission of what we do, which is helping people interact.

The two big things that we're really focused on now in Watch are, within the Watch tab, also just making sure that the consumption isn't all just passive consumption and making it so that there are more two-way interactions between viewers and the creators and that we can help build community around that, where we've built this great feature, Watch Party, that allows people to come together with their friends to watch different content and premiers. It's a new feature that allows people to basically take a video and stream it live for the first time when it comes out. So these are all things that make it so the video-watching experience isn't just about passive consumption but about interaction, and that's going to, I think, help really drive engagement as well. Then there's also the monetization side for creators, which is going to be really important for making it so that we have the content that people want to consume. And that's just a big thing that we're continuing to focus on. We think that the more money that creators can make through Watch, there will be a virtuous cycle there. And that's

going to be really important for continuing to grow this as well. But right now, it looks like this is going in a good direction. It's still very early. We're still growing quickly but from a small base, but it's one of the things that I'm excited about for this year.

Operator

Our next question comes from the line of Doug Anmuth from JPMorgan.

Douglas Anmuth

One for Mark and one for Dave. Mark, it's been more than a year since you shifted to feeds for more friends and family and removed the passive videos, as you just talked about, and reported engagement numbers, obviously good. Are there any signs that the changes you made a year ago are now having a more positive impact on engagement in the core Facebook feed? And then, Dave, you talked 3 months ago about better aligning revenue and expenses in 2020. I was just curious if that's still your view at this point. What gives you the confidence you can do that? And what changes most from a spending perspective as you look toward 2020?

David Wehner

Yes, I can start on the expense front. We continue to have an outlook for expense growth in 2019 of 40% to 50% total expense growth. We did see headcount growth come down modestly in Q4 from Q3 to 42%. As we look out, we do expect that beyond 2018 - sorry, beyond 2019, we'll have expense growth more in line with revenue growth. But we do plan to continue to invest aggressively in the priority areas, including on the innovation side with AR/VR and AI and continuing to invest in the safety and security programs that we're undergoing. And then CapEx, we'll see continue to flow in through the P&L over time. And you already saw that pick up with the cost of revenue growth in Q4. And so we'll expect to see more of that flow through over time. So I would say, we do plan to continue to invest aggressively in the business going forward, and we are going to see, obviously, a margin impact from that in 2019.

Mark Zuckerberg

And I can talk a bit about meaningful social interactions, although I don't have any specific metrics to share on this. I mean, my own take of this, I think this has gone pretty well and has done what we had hoped, although we've made a number of changes. This is a long-term direction that we're going to continue making more ranking changes and building more products around, but I think that this is kind of reflected broadly in the numbers that you see on engagement and the growth in daily actives and how people are

engaging across the family of apps. At the time, what I basically said was, that even though this might decrease time spent and we expected that it would, is we took out especially a bunch of watching of viral videos. We thought that helping people interact more was the unique thing that people come to our services for and that it would be good for the community and the business over the long term. And certainly, everything that we've seen since then suggests that, that is right.

Operator

Your next question comes from the line of Justin Post from Bank of America Merrill Lynch.

Justin Post

Great. A couple of questions. First, pretty rough press cycle in Q4. Did you see any impact in the U.S. and Europe on engagement or usage or people closing their accounts? It certainly doesn't seem evident in MAU numbers. But just anecdotally, did you see any impact or - on that? And then maybe to Sheryl, if we look at trailing 12 month monetization in the U.S. ARPU, it's about \$110. And just how do you think about that long term? If you improve targeting, is there room to grow that significantly? Obviously, Instagram's a growth platform that's contributing to that there. But just how do you think about where ARPU is and where it could be very long term?

David Wehner

Justin, I can probably take both of those. In terms of our ability to continue to grow the advertising business, it's about working to develop the best products we can to enable advertisers to achieve their end business results. Targeting is obviously very important in that. One of the things I would point out is that from a pricing perspective, there are headwinds that we might face on targeting, given the overall privacy landscape in 2019. And so I think that is another factor that presents risk in our ability to continue to grow ARPU. So I would point that out as being an issue. As well, we're seeing a mix shift towards Stories. And that is going to be something that will contribute to a deceleration of our revenue growth. So that's another factor that's leading to deceleration of revenue growth in 2019. In terms of your first question, Justin, about the impact of the press cycle, I would just - I'd probably just let the numbers stand for themselves. We saw that we are growing in all regions albeit we're sort of bouncing around in the developed markets like the U.S. and Canada. In Q4, we saw better growth in Europe because we've come off of the GDPR - the first two quarters of GDPR. So we saw a little bit of a rebound there.

Sheryl Sandberg

I'll talk a little bit about long-term growth opportunities. David is, of course, right that the mix shift and pricing continues to be an issue. But I think over the very long term, which is how you framed your question, we have a lot of opportunity. If you look at what percentage of our ads are truly relevant to the people who are seeing them, I think we've done a lot better over the last couple of years, but we have a long way to go. And that means that for every ad we show, that ad can be better, better for people, show something they're more interested in. I also think the shift we're seeing towards people doing more measurable results, and this is important to understand. It's not just what people think of as direct response advertisers. It's some of the largest brands in the world really going for the results that they're looking for. That bodes very well for our business because we think we can do that very efficiently. And then when we have new opportunities that open up like Stories, even with some pressure on pricing, we think that gives us more inventory and more opportunity and more formats, and we haven't really even gotten started on future things like messaging. So over the very long run, I think we remain very optimistic about the growth opportunities we have.

Operator

Your next question comes from the line of Mark Mahaney from RBC Capital Markets.

Zachary Schwartzman

It's Zachary Schwartzman on for Mark. Mark, I have a question on data privacy as it relates to your 2019 goal of progressing major social issues. This is a topic that is important for the Internet ecosystem as a whole and not just Facebook, and it appears that regulators are struggling to come up with comprehensive reform that it's appropriate for all stakeholders involved. Facebook has invested a lot to improve data privacy, transparency and trust in the platform over the last year, but I wanted to hear your thoughts on the following. In your Facebook post at the end of 2018, you asked the question of whether we should decentralize authority through encryption or other means to put more power into the people's hands and that you plan to discuss these topics in the public domains. As the accumulation of data and micro targeting increases, so can the value of individual's data. Do you see a future where individuals are compensated for renting their data to Facebook and other tech companies? Will that be in the form of crypto through decentralized blockchains or other methods like a traffic acquisition cost? I know we're in early days and due to scalability and consumer adoption roadblocks, this isn't possible yet, but do you believe these technologies are real existential risk or perhaps even a solution to the current data privacy trust and control issues on the Internet?

Mark Zuckerberg

I mean, this is a really important question, one that we are spending a lot of time on, broadly thinking about. I do generally - I mean, I believe very strongly in trying to decentralize and put power in individual's hands. I mean, that's always been the first part of the mission of Facebook, is giving people the power to share, to connect, to come together and build communities, but give people the power has always been the primary and first thing that we have focused on. And one of the ways that we're talking about decentralization is through end-to-end encryption in messaging. I do think that there is a very broad sense, as you're saying, that - and greater awareness that having data stored for long periods of time with companies cannot only be an asset, and that it can help provide better services but can also be a liability in that there could be breaches or the data could be used in ways that weren't intended.

And I think people broadly are starting to get that more, which is why things like encryption are so attractive to people and why features around ephemerality or keeping data less permanently are becoming increasingly important. So when you think about the types of products that we're building on messaging, where encryption is going to play a huge role, sharing with your friends, where Stories, which is ephemeral, is the main thing that's growing. I mean, these are really privacy-first products, and I think that, that's kind of the most important way that we're thinking about this whole space overall. I think that this is going to become increasingly important not just from the perspective of what does the privacy policy say but how is this deeply designed into the products that we're building. I mean, these are the products that are growing the quickest and these are differentiating parts of why they work and why people prefer them as opposed to other services. In terms of regulation overall, I think that, that's going to be very important. We - the basic - the principles behind GDPR in Europe, I think we're very important, and I think having that codified around the world would be a very positive step. And I mean, we're working with folks to enable that but I think that, that would be good for people everywhere to make sure that basically every person who uses an Internet service has the same protections no matter where they live.

Operator

Your next question comes from the line of Lloyd Walmsley from Deutsche Bank.

Lloyd Walmsley

Two if I can. First, Mark, it sounds like there's really a clear shift this year to more aggressive core product development. You talked about a lot of areas across Instagram commerce, Messaging, Payments in WhatsApp and many more. I guess, are there any that you would point out that could be a material contributor to revenue over the next 2 to 3 years and if - I guess, if there's, yes, any you would call out? And then, secondly, when you look at the Stories ad in adoption, is there any difference you're seeing between the more sophisticated advertisers and smaller advertisers either in terms of adoption or performance? And do you see any inhibitions to long-term success among smaller advertisers with the format? Or do you think they can compete effectively in the creative side?

David Wehner

Lloyd, I'll take - it's Dave. I'll take the first one in terms of material contributors to revenue. Look, I think on a lot of those fronts, it's very early. I'd say commerce broadly and e-commerce is an important vertical for our advertising business. So our success in building - continuing to build good advertising products for our e-commerce clients on the advertising side will be a more important contributor to revenue in the foreseeable future than the new area. So that's what I would focus on. I think those are still very small and we're very early in those being anything from a contribution point of view on revenue. And then I think you had a question on the Stories ad. I think Sheryl will take that.

Sheryl Sandberg

Yes, I can take that. So at 2 million advertisers in Stories, we're obviously seeing broad adoption and that means you have both. You have large advertisers and small advertisers. It's definitely the case that sometimes small advertisers or medium-sized advertisers can sometimes move the fastest. But one of the things we're most proud of, and Mark talked about it in his remarks as well, is that we take tools that were previously only available to large companies and make them available to small companies. And one of the things we've learned over the years is that the easier we make it for our advertisers, whether they're really big or really small, the more they'll adopt. So what - with the work we've done to "We'll take your pictures, we'll take your post and we'll create the story for you," we do automatic placements, I think that makes it easier. And I'll share one specific example of a medium-sized company. Cetaphil is a skin care brand. They ran video ads across IG - Instagram Stories, Instagram feed and Facebook, targeted to Canadian women aged 25 to 54, and they were measuring all the way through to sales and they saw almost a 7%, so 6.9% lift in store sales. So what we want to do is get marketers to use our tools, use the technology we have to do automatic placements, show people things

they're interested in, so ads are a good experience, but really help them ring the cash registers so that they know their dollars or their pound or their euro are well spent, and that's what we're pushing to do.

Mark Zuckerberg

And I'll add one thing, which I think David has said this a couple of times, but I think it's worth emphasizing that while I'm excited about the road map that we have and it's going to be great over the long term, the growth of the business over the next year, a few quarters or the near term is going to be mostly based on the growth of Stories and the core News Feed work. And Stories is - we have a lot of work still to go there to make it - monetize at the same levels as News Feed. And I'm confident that we're going to get there, but I want to make sure that we're giving the right outlook on how we expect the near future to go.

Operator

Your next question comes from the line of Mark May from Citi.

Mark May

First, regarding Stories again. Given the size of the WhatsApp audience and the amount of status posts on that platform, just curious about your early learnings from testing status ads on WhatsApp and how optimistic are you that, that will become an interesting and meaningful opportunity going forward. And in terms of Stories on Facebook, from what we can gather, Stories consumption and impression volume on the core Facebook ad seems to maybe not be scaling as fast as some of it and maybe even that some of your comments last year suggested that, that in - if, in fact, that's true, do you - why do you think that, that is? And does that actually pose any sort of issue to your long-term growth plans for Stories, at least on that platform?

Sheryl Sandberg

Yes. So WhatsApp, we don't have ads in Stories. It's not available. Ads are something that's more of a future thing for WhatsApp. We remain very focused on the consumer experience there. We do have the WhatsApp Business app, which is helping businesses connect with consumers, and that's growing well but that monetization opportunity is not available.

David Wehner

Yes. And Stories on Facebook, clearly, Stories is a big success on Instagram. From an impression growth perspective, we're pleased with what we're seeing there, and we're optimistic on our ability to grow Stories on Facebook

but it's much earlier on the Facebook platform. So we have to just continue to work to build that format on Facebook.

Mark Zuckerberg

Yes. And just to add quickly, I mean, Stories on Facebook is growing quickly. I think we're going to get to where we need to get to there. We started a little bit later, and some of the early execution, I think, wasn't as good as it needed to be. But I think we're doing good work there now and it's growing quite quickly. So I'm confident about where we're going to be there.

Operator

Your next question comes from the line of Ross Sandler from Barclays.

Ross Sandler

I guess, a question on Messenger. Any learnings from the monetization efforts at Messenger? You've got inbox ads that you've done. You just mentioned Stories ads are starting to enter Messenger. So I guess, what are you seeing there? And what are you most excited about as far as monetizing Messenger? And I guess, what might be applicable at some point in the future to WhatsApp? And then, Mark, you mentioned Payments in WhatsApp. We know that you guys have been working on that for a little while in the background, but any thoughts on how that's going to play out in terms of what geographic markets that might be available? And then - and kind of what do you see as the future opportunity in Payments?

Sheryl Sandberg

Our approach to monetization anywhere is always very cautious and we are very - moving very slowly on Messenger, where we remain primarily focused on consumer growth and engagement. Our real focus has been on the organic connections between businesses and consumers, where this is a really strong channel for customer service. We now have 10 billion messages being sent between people and businesses every month. And of course, that includes automated messages as well. We continue to make progress with monetization. We're starting to roll out Stories ads, but it is very early days and we think it will be a long road ahead. It's also probably worth noting that the experiences we had to date, moving from Facebook to Instagram, were more similar, that the Instagram feed is similar to the Facebook feed in terms of what you can do with advertising. And so Messenger and messaging services, if Stories is one click different from that, that's a few clicks different than that. So we're going to have some real work to do.

Operator

Your next question comes from the line of Colin Sebastian from Robert W. Baird.

Colin Sebastian

Mark, you mentioned Facebook Groups as one part of the community effort. And I wonder if you could expand on how you see Groups gaining a higher profile and how that extends to other apps potentially? And then, secondly, listening to the descriptions of the convergence of features and usage across the apps, such as in Stories and messages, I wonder how we should think about how that could impact usage and engagement if people are also converging their own use into 1 or 2 apps instead of the broad suite if that's something that we should keep an eye on.

Mark Zuckerberg

All right. So for Groups, the main thing that we're focused on is making it so that connecting with communities of people that you're interested in is going to be as central to the experience as connecting with friends and family. So it's not just a feature. It's going to become more of an organizing principle for more of the activity in the app. And friends and family is always going to be really central to what we do, but we just think that there's an opportunity now to do more and to make it so that people can also be a part of these meaningful communities. Hundreds of millions of people already tell us that the groups that they're a part of on Facebook or at least a few meaningful ones are the most important part of their social experience. There's a lot of data, sociological data outside, that shows that a physical group membership in the world off the Internet has been declining for decades. So I think that building groups is - it obviously cannot replace people getting together in person, and a lot of the most successful groups are successful because they facilitate people going and doing things together in person as well. But we think that this is a real human need and a sociological need and it's an important thing that people need to do. And I think it's going to be one of the next big areas that I'm really excited about the Facebook uptick. It's worth pointing out here that while Instagram doesn't have Groups, we also really focus on community and interest there, more around discovery and hashtags and explore, being able to really delve into your interests and interact with people who are interested in the same things that you are there, even if they're not your friends. So that's going to be an increasing part of that experience too. I think there might have been another question but I - no? All right.

Operator

Your next question comes from the line of Rich Greenfield from BTIG.

Richard Greenfield

If I think about kind of the San Francisco Valley kind of elitist community and even, I think, a good chunk of Wall Street, there's been this kind of ongoing narrative that nobody uses core Facebook blue anymore and really, time spent is all about Instagram. Your DAU numbers obviously give a good sense that people are touching Facebook still, core Facebook on a regular basis, but we don't really get any sense of engagement with Facebook versus your other apps. Is there anything you can do to give us some color or sense? I mean, you've talked about Marketplace before on the call, but any way of getting a sense of actual usage trends and what you're seeing in terms of core Facebook versus Instagram versus the communications apps, et cetera?

David Wehner

Rich, it's Dave. Look, I think the DAU trends that we're giving really do paint the picture broadly, which is stability in the developed markets, growth for Facebook blue in the developing markets. We're not giving an update on time spent. That's not our major focus. We pivoted to focus on meaningful social interactions and we've been pleased with the results of that effort broadly, but I think that DAU trends tell the story broadly.

Operator

Your last question comes from the line of John Blackledge from Cowen.

John Blackledge

For Mark, just curious if you're happy with the progress around the safety and security initiatives. And going forward, is there any kind of recurring metric or anything you can disclose to show progress that you guys might see internally but Facebook users and other constituents maybe don't see? And then just a quick one on pricing on Instagram Stories. Should we expect to see the pricing gap close between feed and Stories over the course of 2019?

David Wehner

John, I can real quickly take the pricing question first. The reality is pricing is a function of supply and demand and how demand grows versus supply. So while I do expect that we'll bring more advertisers to Stories and we'll bring more advertising formats to Stories and that will create more demand for Stories, we're also growing Stories inventory quickly. So those two things will balance out in price. Feed from a growth perspective on an impression front is more constrained given where we are with ad loads on Facebook and

Instagram. So there'll be more pricing pressure there because there's already strong demand for feed products. So in terms of convergence, it's hard to say how those things will play out. We do think there's opportunities to improve the value of the Stories format that will translate into better price for Stories. But how it converges over time, there's a lot of different dynamics there.

Mark Zuckerberg

Yes. And on all the content and safety and security issues, there's more to do here but I'm proud of the work that we've done to get in front of a lot more of these issues. If you think about the journey that the company has really been on for the last couple of years, it's moving from reactively dealing with issues that our community flags. Perhaps if someone sees some content that's problematic, they used to tell us about it and then we'd go look at it to now, increasingly, we're building AI systems and we have tens of thousands of people who are doing more proactive review of content that could be potentially problematic. And we're prioritizing the different types of content that we think could create the most harm. So one of the things that we worked on earliest was removing terrorist propaganda. One of the things that we're proud of there is, there are now 99% of the ISIS and Al Qaeda content that we take down, our AI flags it, removes it before people see it. Another area that we really care about that's deeply important is self-harm, right? And that's an area where the goal isn't to take down the content, but if we see an area where - if we see something that a person might be thinking about hurting themselves, we now have thousands of people and technical tools that can flag this content to those people to - so we can actually go get first responders to go reach out to people.

And I think in the last six months or a year alone, there have been hundreds, if not thousands, of cases where we've been able to get first responders to people when they needed help because of this approach of being more proactive on looking at the content. The same goes for things around election interference and more proactively looking for inauthentic behavior. And we've taken down a lot of effort by different nation states to harm or interfere in elections that way. So we're just going to go down the list of every basic type of bad content. And we do report this publicly, going back to your question. We issue a transparency report. It's our content enforcement report. Right now, we're doing it, I think it's every six months, but the goal is to get that to the cadence by, I think it's the end of this year, we're going to be doing it quarterly and doing calls to discuss the results just like we do for earnings because we think that this stuff is really important as well, at the same level there.

So where I come to summarize where I think we are, coming into 2019 is, 2017 and 2018 were really - we had a lot of hard work to do, but we also needed to figure out what the road map was going to be going forward. And while we haven't solved all of the issues yet - you never solve all of the issues, but we certainly have a lot more to do on our road map. The way that I feel starting 2019 is that we have clear road maps for what we need to go do. And I think you're going to be able to look at these transparency reports as we issue them and see that we're continually making more progress, finding more of the content proactively, taking - getting better at taking it down, getting better at not distributing stuff that's borderline. And that's just some of the most important work that we're doing. It's also the first priority again for this year, is making - continuing to make progress on the big, substantive issues facing the Internet and our company because there's still a lot more to do here, and this is incredibly important. But I do feel like we've started to turn a corner and have a clear plan for what we need to do here now. So thanks for that question.

Deborah Crawford

Great. Thank you. Thank you for joining us today. We appreciate your time and we look forward to speaking with you again.