

Operator

Good day ladies and gentlemen, and welcome to the Alphabet Fourth Quarter 2018 Earnings Call. [Operator Instructions] I'd now like to turn the conference over to Ellen West, Head of Investor Relations. Please go ahead.

Ellen West

... fourth quarter 2018 earnings conference call. With us today are Ruth Porat and Sundar Pichai.

Now I'll quickly cover the Safe Harbor. Some of the statements that we make today regarding our business performance and operations and our expected level of capital expenditures may be considered forward looking and such statements involve a number of risks and uncertainties that could cause actual results to differ materially. For more information, please refer to the risk factors discussed in our most recent Form 10-K filed with the SEC.

During this call, we will present both GAAP and non-GAAP financial measures. A reconciliation of GAAP to non-GAAP measures is included in today's earnings press release, which is distributed and available to the public through our Investor Relations Web site located at abc.xyz/investor.

And now I'll turn the call over to Ruth.

Ruth Porat

Thank you, Ellen. We have a strong 2018, with total revenues of \$136.8 billion, up 23% over 2017, reflecting the benefit of our ongoing investments to deliver exceptional experiences for users and compelling returns for our advertisers, partners and enterprise customers.

For the fourth quarter, revenues of \$39.3 billion or up 22% year-on-year and up 23% in constant currency, as we continue to benefit from ongoing strength in mobile search with important contributions from YouTube, Cloud and Desktop Search.

For today's call, I will begin with a review of results for the quarter on a consolidated basis for Alphabet focusing on year-over-year changes. I will then review results for Google followed by Other Bets, and will conclude with our outlook. Sundar will then discuss business and product highlights after which we will take your questions.

Let me start with a summary of Alphabet's consolidated financial performance for the quarter: our total revenues of \$39.3 billion reflect a

negative currency impact year-over-year of \$724 million or \$600 million after the impact of our hedging program.

Turning to Alphabet revenues by geography, you can see that our performance was strong again in all regions: U.S. revenues were \$18.7 billion, up 21% year-over-year. EMEA revenues were \$12.4 billion, up 20% year-over-year in both reported and constant currency terms with a slight headwind primarily from the euro.

APAC revenues were \$6.1 billion, up 29% versus last year and up 32% in constant currency, reflecting weakness of the Australian dollar. Other Americas revenues were \$2.2 billion, up 16% year-over-year and up 26% in constant currency, reflecting weakening of the Brazilian real and the Argentine peso.

On a consolidated basis, total cost of revenues including TAC, which I'll discuss in the Google segment results, was \$17.9 billion, up 26% year-on-year. Other cost of revenues on a consolidated basis was \$10.5 billion, up 34% year-over-year, primarily driven by Google-related expenses.

The key drivers were: first, content acquisition costs, primarily for YouTube, mostly for our advertising supported content in what is a seasonally strong quarter for YouTube, but also for our newer subscription businesses, YouTube Premium and YouTube TV which have higher CAC as a percentage of revenues. Second, costs associated with our data centers and other operations, including depreciation and, third, hardware related costs for our made by Google and Nest family of products.

Operating expenses were \$13.2 billion, up 27% year-over-year. The biggest increase was in R&D expenses, with the larger driver being headcount growth, followed by the accrual of compensation expenses to reflect increases in the valuation of equity in certain Other Bets. Growth in Sales and marketing expenses reflect increases in sales and marketing headcount primarily for Cloud and Ads followed by advertising investments mainly in Search and the Assistant. The growth in G&A expenses reflects mostly increases in headcount.

Stock-based compensation totaled \$2.3 billion. Headcount at the end of the quarter was 98,771, up 4,399 from last quarter. Consistent with prior quarters, the majority of new hires were engineers and product managers. In terms of product areas, the most sizable head count increases were in Cloud for both technical and sales roles.

Operating income was \$8.2 billion, up 7% versus last year for an operating margin of 21%. Other income and expense was \$1.9 billion, which includes \$1.3 billion of unrealized gain related to a non-marketable debt security

investment. We provide more detail on these line items within OI&E in our earnings press release.

Our effective tax rate was 11.2% for the fourth quarter, reflecting a discrete benefit due to the reversal of an accrual made as a result of updated guidance associated with the U.S Tax Act. Net income was \$8.9 billion and earnings per diluted share were \$12.77.

Turning now to CapEx and operating cash flow. Cash CapEx for the quarter was \$7.1 billion, which I'll discuss in the Google segment results. Operating cash flow was \$13 billion with free cash flow of \$5.9 billion. We ended the quarter with cash and marketable securities of approximately \$109 billion.

Let me now turn to our segment financial results. Starting with the Google segment. Revenues were \$39.1 billion, up 22% year-over-year. In terms of the revenue detail, Google Sites revenues were \$27 billion in the quarter, up 22% year-over-year. In terms of dollar growth, results were led again by mobile search, with a strong contribution from YouTube followed by desktop search. Network revenues were \$5.6 billion, up 12% year-on-year reflecting the ongoing momentum of AdMob and Google Ad Manager.

Other revenues for Google were \$6.5 billion, up 31% year-over-year fueled by Cloud, Hardware and Play. We continue to provide monetization metrics in our earnings press release to give you a sense of the price and volume dynamics of our advertising businesses.

Total traffic acquisition costs were \$7.4 billion or 23% of total advertising revenues and up 15% year-over-year. Total TAC as a percentage of total advertising revenues was down year-over-year, primarily reflecting a favorable revenue mix shift from network to sites. The increase in the sites' TAC rate year-over-year was driven by the ongoing shift to mobile, which carries higher TAC, followed by changes in partner agreements offset by the seasonally higher proportion of YouTube advertising revenues in the fourth quarter.

In Q4, the network TAC rate declined year-on-year, primarily due to our revenue mix shift within our programmatic business. Google stock-based compensation totaled \$2.1 billion for the quarter, up 22% year-over-year. Operating income was \$9.7 billion, up 13% versus last year and the operating margin was 24.8%. Accrued CapEx for the quarter was \$6.8 billion, reflecting investments in office facilities, datacenters, and servers.

Let me now turn to and talk about Other Bets. I'll cover results for the full-year 2018 because it remains most instructive to look at the financials for Other Bets over a longer-term horizon, as we've discussed on prior calls. Results for the quarter are in our earnings release.

For the full-year 2018, Other Bets revenues were \$595 million, up 25% versus 2017 primarily generated by Fiber and Verily. Operating loss for Other Bets was \$3.4 billion for the full-year 2018 versus an operating loss of \$2.7 billion in 2017. Other Bets accrued CapEx was \$181 million, down from \$493 million in 2017 primarily reflecting investments in Fiber.

Key recent accomplishments include: in December, Waymo launched Waymo One, which enables participants to use its app to hail and pay for rides. Also Verily recently announced a \$1 billion investment round led by Silver Lake as it advances on plans that are complementary and additive to its current life sciences portfolio. That investment of course was in addition to the \$800 million it raised from Temasek previously.

Let me close with some observations on our priorities and longer-term outlook. First, with respect to revenues. Our 23% revenue growth in 2018 was powered in particular by the ongoing benefit of innovation in our Sites business. With eight products, with more than 1 billion users each and more people coming online every day, we remain excited by the opportunities to continue to create valuable experiences for users around the globe.

In particular, we see significant ongoing potential to apply our machine learning capabilities across our businesses. In our advertising business, machine learning has enabled innovation in advertisers ability to match consumer intent into bit more effectively for improved ROI. It has also enhanced the ability of smaller businesses to benefit from advertising on our platforms.

Machine learning is also driving differentiation for newer Google businesses, like Cloud and Hardware, as well as central to a number of Other Bets, most notably Waymo and Verily. Looking ahead, a couple of things to note. First, as we've said many times, we continuously work to enhance the user and advertiser experience because we make changes with a focus on the best interest of users and advertisers over the long-term, the timing of the introduction of new experiences, particularly, in search advertising can vary which can result in an impact on quarterly year-on-year growth.

Second, during 2018, the FX tailwinds in the first half of the year turn to headwinds in the third and fourth quarters, in line with the strengthening of the U.S dollar. Based on the continuing strengthening of the U.S dollar, we expect a headwind to reported versus fixed FX results in the first quarter, in contrast to the favorable impact of FX in the first quarter of 2018.

Turning to investments and profitability. In terms of gross margin, the biggest component within cost of revenues remains our traffic acquisition costs, reflecting our strong revenue growth in mobile search and the fact

that mobile search carries higher TAC than our desktop business. As we've discussed on prior calls, while the pace of year-on-year growth in Sites TAC as a percentage of sites revenues, slowed after the first quarter of 2018. We do expect the Sites TAC rate to continue to increase year-on-year, reflecting ongoing strength in mobile search.

Within OpEx, we remain focused on prioritization in order to optimize resources for longer-term growth in sizable markets. You'll see us continue to support our priority areas with increased headcount, which will remain concentrated in R&D. Although we expect the growth rate to moderate in 2019. In 2018, we also saw continued progress on our goal to nurture new businesses outside of Google, our Other Bets with a model of independence.

While I've said previously that there is no monolithic approach to how the Other Bets execute against opportunities, a shared principle is aligning employee interest with the long-term value creation by these companies. Since inception, this has been an important part of our approach at Google with stock grants comprising a meaningful component of overall compensation across our employee days.

We are increasingly following that approach in the Other Bets with compensation programs that align employee and company interests. You've seen the impact of some of those programs in the fourth quarter as we accrued compensation expenses to reflect increases in the valuation of equity in certain Other Bets. While these expenses will recur, the timing evaluation events is unpredictable and can vary between debts which can affect quarterly comparisons.

Finally, on capital allocation. Our primary use continues to be to support organic growth in our businesses, followed by retaining flexibility for acquisitions. After taking these needs into account, our Board has authorized the repurchase of up to an additional 12.5 billion of our Class C capital stock.

With respect to CapEx, we continue to invest in both compute requirements and for office facilities. Although we expect the CapEx growth rate in 2019 to moderate quite significantly. In conclusion, 2018 was another great year, with tremendous ongoing opportunity ahead of us.

I will now turn the call over to Sundar.

Sundar Pichai

Thanks, Ruth. Last year, we set out to bring the benefits of AI to everyone through our products. And I'm proud of the tremendous progress we made towards that goal. From smart compose and Gmail to the new Google news experience, to call screening on the pixel and improving the overall safety of

our products. AI's helping people get things done every day. Beyond our products, AI is also helping us drive our mission forward at the scale we couldn't have imagined just a few years ago.

Google AI Lead, Jeff Dean recapped the results of our efforts in a great post on our AI blog. Accusing AI to better detect the spread of breast cancer, or providing flood victims, with real-time information in a crisis. I encourage everyone to check it out.

We also launched the Google AI impact challenge to help nonprofits find ways to use AI to solve social and environmental problems. In addition to our progress in AI we saw great traction across newer areas, like the Google assistant, hardware, and Cloud. And our core area such as search maps new use YouTube under computing and advertising platforms continue their strong momentum.

Everything we do at Google is united by the mission of making information accessible and useful for everyone. Providing accurate and trusted information at the scale the internet has reached is an extremely complex challenge. And one that is constantly getting harder. But we've 20 years of experience in these information challenges, and it's what we strive to do better than anyone else.

As we do this, we feel a deep sense of responsibility to do the right thing and are continuing to build privacy and security into the core of our products, keeping users data safe and secure with the industry's best security systems and giving people better and clearer controls. You will see us continue to do a lot more here in 2019.

Today I will start by sharing some of the new ways that we are working towards our mission. Then I will give an update on our video and advertising platforms, followed by the latest on our hardware and cloud efforts. And I will close with a few thoughts on our investments around the world. First, advancing our mission of making information accessible and useful. The Google assistant is a great example of how we help people throughout the day and we demonstrated that at CES last month with lots of exciting new partners and features.

From the Lenovo Smart Clock that wakes you up in the morning to real-time navigation that helps during your commute. To a built in interpreter that translates conversations across dozens of languages on Google home. And speaking of languages, over the past year the Google assistant expanded from eight languages and 14 countries to nearly 30 languages and 80 countries. In that time, the number of active users quadrupled. As we had

more partners, devices and capabilities, the Google assistant will only get better and more helpful.

There's a lot of great progress in other areas too. Last month, we announced the launch of activity cards and search. Now when you search for a topic that you've previously explored, you can quickly see very of already being and pick up where you left off. Thanks to our strengths in AI and Search, Google Lens uses your smartphone camera to help identify more than 1 billion products. So if you see an item that you like, Lens can show you similar designs, along with useful information like product reviews.

We continue to see great momentum across our computing platforms, android and chrome. In Q4, we announced that android was officially support affordable phones that partners like Samsung introducing their first portable devices this year. We see continued traction with manufacturer adoption of android auto. We recently announced new media and messaging features to significantly simplify and improve the car dashboard experience.

And building on the speed simplicity and security of chrome OS, partners like Asus and HP, introduced a slew of great consumer and enterprise Chromebooks last months at CES. Now let me provide an update on our video and advertising platforms, starting with YouTube.

We are seeing great traction in some of our newer experiences on YouTube. YouTube music and YouTube Premium are now available in nearly 30 countries up from five countries at the start of 2018. Last month, YouTube TV announced that it is expanded nationwide to cover 98% of U.S households with the rest to follow shortly. YouTube continues to invest in its thriving community of creators and build great features for its nearly 2 billion monthly log in users.

For instance in Q4, the expanded access to tools like stories and community polls that strengthen the connections between France and creators. One of our newest tools, Premiers, is a breakout hit. Ariana Grande's premiere of her official music video for Thank U, Next in November holds the record for biggest music video debut in YouTube history earning over \$55 million views in its first day.

We are driving revenue to the YouTube creator community from established channels to newly emerging ones. The number of YouTube channels with more than 1 million subscribers nearly doubled in the last year, and the number of creators earning five or six figures grew by more than 40% year-over-year. A big priority for YouTube in 2019 is to continue our work to quickly find and remove content that violates YouTube's content guidelines.

It's an important challenge and with advanced machine learning and investments in human reviewers, we are making continued progress. Now I'll touch on some of the recent highlights of our advertising business, which continue to go from strength to strength. Recently, Warner Brothers embedded the first full-length film with an ad on YouTube and reached a record number of people.

Over 17 million users in a single day. Viewers who watch the trailer for LEGO Movie 2 on Black Friday, were served the franchise's original film for free within the Ad. So great example of how advertisers continue to delight users on YouTube. Performance advertisers love TrueView for action. YouTube's direct response offering. Since the product launch in March 2018 over 30% of the advertisers who use TrueView for action were new to buying inc and video ads on YouTube.

In Q4, we also announced a global strategic ad tech relationship with The Walt Disney Company across their entire portfolio of brands and properties. With Google Ad Manager as its core platform, Disney will be able to serve across its digital property seamlessly. On the web and mobile apps through connected TVs and even during live events.

Our shopping tools, that are also front and center during the holidays, helping retailers reach people during the busy holiday shopping season. In fact, the number of shopping daily active users on Google.com during the holidays, double compared to last year. Thanks and part to new features like product list modules that showcase the most popular products across the web.

Small retailers are also benefiting from automated bidding solutions like smart shopping campaigns, which now has more than 20,000 live merchants. Impressive progress since launching in April. Now on to our growing hardware efforts. During the holiday season, our newest line up of made by Google Devices top many best of 2018 looks. The response from shoppers was equally positive.

It was another record year for our Google home family of devices, with million sold this holiday season. They're helping people easily get things done around the house. For example, people use Google home devices to cook over 16 million recipes this holiday season. 1 million on Christmas Day alone. Our newest smart displays were particularly popular. One out of every seven Google home devices activated or the holiday season was a Google home hub.

In Q4, we launched significant advances in computational photography in our pixel three with features such as night sight for lowlight photos. We've

also expanded availability to four more countries: Japan, France, Ireland, and Taiwan. And finally, our growing cloud business. I want to thank Diane Greene for her leadership over the last three years.

Google Cloud is a fast-growing multibillion-dollar business that supports major global 5,000 companies in every important vertical with a robust enterprise organization. This was not the case just three years ago. What Diane and their team accomplished, it's phenomenal. Now Diane's work is done and she has handed the reins to Thomas Kurian, and I'm thrilled to have him here as our new Cloud leader.

Google Cloud closed out the strong year, with momentum across the business. Last year, we more than doubled both the number of Google Cloud platform deals over \$1 million as well as the number of multiyear contracts signed. We also ended the year with another milestone, passing 5 million paying customers for our cloud collaboration and productivity solution G suite. Our focus on helping customers digitally transform their businesses is paying off.

We continue to see strong growth in all our major geographies and industries this quarter. In financial services, we signed agreements with two of the top financial institutions in the U.S to help them transition their business to Google Cloud with our highly secured solutions. In retail, brands like Bed Bath & Beyond, DSW and Ulta Beauty are using our cloud to manage data and provide more personalized experiences to consumer.

In Media and Entertainment, the telegraph and the U.K's going all in with Google Cloud because of our data and machine learning expertise. To support our global growth, in Q4, we launched our 18th Google cloud region and announced plans for a new region in Jakarta. So as you can see we are investing in the many incredible opportunities across our business. We would also investing in communities around the world and right here at home. I was recently in Europe opening up our new office in Berlin, which will help us more than doubled the number of Googlers who work there.

Across Europe, we've invested more than €4.3 billion in five data centers since 2007. And in Q4, we announced a new data center coming in Denmark. In all, it's estimated that these data centers have generated more than €5.4 billion in GDP over the last ticket. Of course the amount generated by our creator, publisher and app developer partners across the region is orders of magnitude larger.

We also continue our substantial investments throughout the U.S. Last year, we made significant investments in new and expanded office space. In Q4, we open the doors to our new office in Detroit and announced that we will be

investing over \$1 billion in capital improvements to establish a new campus in New York City, which will begin to open in 2020.

We are also continuing to invest in data center construction and expansion. There is an important long-term investment that lay the groundwork for our future computing needs primarily to x-rayed machine learning across our businesses. But also to support the opportunities we see in cloud, search, ads and YouTube. More than 20 years in there is still tremendous opportunity for Google to help people save time, learn new things, grow their businesses and build stronger communities. I want thank every Googler around the world for making 2018, a great year for users and our business.

With that I'll hand it back over to Ruth.

Ruth Porat

Thank you, Sundar. And we will now take your questions.

Question-and-Answer Session

Operator

Thank you. [Operator Instructions] And our first question comes from Eric Sheridan of UBS. Your line is now open.

Eric Sheridan

Thank you so much for taking the question. Two, if I could. On YouTube, you never have a number of brands in the marketplace between YouTube Premium, TV, YouTube Music. How are you thinking about positioning those brands against a global opportunity, especially in mobile to consume media on a global scale and how you're positioning those brands for the opportunity. And then, Ruth, I wanted to come back to comment on revenue versus extends with respect to YouTube. It sounds like called out YouTube as strong in the quarter on the revenue side, but is depressed on the expense side. Was that because of licensed content for things like Music and YouTube TV, or what is ad splits? How should we think about what the drivers were there and how they're now permanent versus seasonal in Q4. Thank you so much.

Sundar Pichai

Thanks Eric. On the YouTube question, of course, our core effort is around the main YouTube product and that is what works at scale globally across the world and we are seeing continued engagement and it's doing very well. We are committed to making sure there's a premium experience on

YouTube, delivering the content people would want and YouTube Music is an important part of that as well. So we're investing in both. As you know YouTube TV is U.S only and we are definitely -- it's an exciting product. It's differentiated and has long run value for us because it brings our advertising products together including being able to serve it across TV. So we are clearly investing in areas where we see opportunity. We are pretty thorough about making sure our investments deliver growth on the other side. And so we monitored with metrics and beat engagement and revenue growth and we see a lot of opportunity here.

Ruth Porat

And then in terms of revenue it's an investment in YouTube, overall, as Sundar said, we are -- YouTube is continuing to benefit from the secular change the way users are consuming content and that's reflected in strong revenue growth. Brand advertising does remain the largest part of the business. It's growing at a strong pace and as I said in opening comments, we're particularly excited about the significant growth in direct response both TrueView for action and app promo formats are delivering a great value for users and advertisers, and that's driving growth across regions and channels. In terms of the expenses, I think what you're referring to is within other cost revenues. The primary driver in the fourth quarter was the increase in content acquisition costs due to YouTube growth and that's both for ad supported content and what is typically a seasonally strong quarter. And also for our newer subscription businesses, which do have higher TAC as a percentage of revenue we're excited about the growth we're seeing here.

Operator

Thank you. And our next question comes from Anthony DiClemente of Evercore. Your line is now open.

Anthony DiClemente

Great. Thank you so much for taking my questions. One for Ruth and one for Sundar. Ruth, if I look at the segment operating losses for Other Bets, they were higher both in the fourth quarter and for the year '18 over '17. Is it safe to assume that investments at Waymo or can you just flush out a little bit more for us if possible, were there other Other Bets besides Waymo, which were worthy of call out in terms of greater or decreasing investment. That will be great? And then for, Sundar, I'm just wondering if you could provide us any commentary about how good the Cloud is going? Any milestones? You talked about the investment there. Ruth did, I think, in terms of headcount growth in technical and sales roles and for the new leadership that you mentioned what is the things that the new -- that

Thomas Kurian can kind of do Cloud to accelerate the next phase of growth in that business. Thank you so much.

Ruth Porat

So in terms of the investment levels in Other Bets, the major point is that we are investing across Other Bets commencement with what we think is required kind of looking out at the opportunity set for each one. And we go through a regular process with weekly business reviews and quarterly board reviews and try and calibrate the appropriate pace of investment. In terms of the increase this quarter, as I indicated in opening comments, we accrued some comp expenses for a number of bets and that was really to reflect increases in the valuation of equity in certain Other Bets.

Sundar Pichai

On Cloud, one of the things that was evident towards the end of last year is now our inability to win in a very large customers global 5,000 companies with multiyear contracts. And so that's definitely something we want to focus on. I think Dyne and Thomas have been working closely on a transition with a lot of continuity, and you'll continue to see us. It's very clear to us that our product offerings are ready and differentiated and so we want to invest and scale our go-to-market both in terms of direct sales and our channel partnerships. And maybe you will see us focus more on areas where we're clearly seeing returns. Be the geographic regions we care about the six main verticals where most of the momentum is. And within product offerings, the five major areas where we've clearly defined product with differentiated features to. But I'm excited at the traction we are seeing, we are getting large wins and I look forward to executing here.

Eric Sheridan

Thank you.

Operator

Thank you. And our next question comes from Doug Anmuth of JPMorgan. Your line is now open.

Douglas Anmuth

Great. Thanks for taking the questions. I just wanted to ask to, first, can you think about the strong Google Sites growth 23%, that's actually neutral. Can you just help us understand some of the mobile search innovations that you think are really driving things here beyond some of these underlying secular strength, with the particular focus perhaps on the retail channel, and just

how you're thinking about the opportunity there? And then, second, Ruth, just wanted to go back to your comment on OpEx. Just wanted to clarify, were you saying that headcount growth, specifically you think will moderate in '19 or are you talking about overall OpEx spending? Thank you.

Sundar Pichai

Doug, on the first one, obviously we have thousands of engineers working on continually launching search improvements. I think for me a lot of this has been the clear hard work that's gone into making sure search on mobile works really, really well removing friction where we can constantly working to get the answers, a bit quicker and faster and make -- making the more relevant. So to me it's more a set of a continual innovation mentality that we've had there for a long time. And that's really working at scale.

Ruth Porat

And then the specific comment I think you're referencing is I was pointing to headcount growth. We are continuing to hire to support growth opportunities, particularly hiring engineers and product managers in Google and continuing to support growth in Cloud, and what I was just trying to draw out was we will continue to hire, but the year-on-year growth rate will moderate there.

Douglas Anmuth

Okay. Thank you, both.

Operator

Thank you. And then next question comes from Heather Bellini of Goldman Sachs. Your line is now open.

Heather Bellini

Great. Thank you. Yes, I had a follow-up on to Anthony's questions on cloud. It doesn't seem like you want to share an update on the revenue run rate. But I was wondering if maybe you can share with us what you're seeing in terms of year-over-year growth rate, and in particular are they growing faster than what the competitors disclosed in their public results? Because maybe they will help think about the pace of growth in your Cloud business. And then, secondarily I was just wondering if you can give us a sense of the types of workloads, if there's any commonality to the types of workloads, you might be running work frequently than not. Thank you.

Ruth Porat

So, in terms of growth, Cloud does continue to deliver sizable revenue growth driven by GCP and GCP does remain one of the fastest-growing businesses across Alphabet. As Sundar said, we double the number of GCT contracts greater than a 1 million. We are also seeing a really nice uptick in the number of deals that are greater than \$100 million and really pleased with the success and penetration there. At this point, not updating further.

Sundar Pichai

Heather, I think maybe specifically a couple of examples, there's definitely we see clear strength in data management and analytics, so we can take specs -- for example, in retail or if you take someone like the Telegraph, those very important factors. Application platforms, so our ability to help customers, deploy cloud native applications has been a differentiator for customers like Unity, Ubisoft, etcetera. And Multi Cloud, ability to run cloud services across Clouds on Prem. In terms out to be very important for global multinational companies like HSBC. So we do see a wide variety of stuff. We are clearly focused on infrastructure being an application platform, data management and smart analytics, and of course with G suite productivity and collaboration. So that's the core areas we are investing in from a product and a go-to-market standpoint. And we are seeing great traction there.

Operator

Thank you. And the next question comes from Brian Nowak of Morgan Stanley. Your line is now open.

Brian Nowak

Thanks for taking my questions. I have two. Just the first one to go back to YouTube in a very strong quarter. It sounds like on branded advertising and now some of these new direct response ads. I was curious, Sundar, as you think about with an innovation focus, what do you see as being one or two of the biggest opportunities to further improve the quality or the efficacy of the ad product, you provide for advertisers on YouTube from here. And then Waymo, got a couple of milestones. But the last 3 to 6 months, maybe talk us through how you see the next one or two big factors that you're really focused on ensuring that Waymo becomes what it could be?

Sundar Pichai

On YouTube, I still think we are in early days of making sure YouTube is better platform for direct response and TrueView for action is still early. We see great traction, but I think there's a lot more to do and I think we had a set of features which we launched last year to make sure it works better. But

I think there's a lot more to do. In the long run, I think for me, YouTube is a place where we see users not only come for entertainment, they come to find information, they're coming to learn about things. They're coming to discover, to research and so being able to match that intent over time in a way that we can bring the right value for our users and advertisers. I think there's a long run opportunity. And we're taking all the right foundational steps to realize it.

Ruth Porat

And in terms of Waymo, as you know well, we are intently focused on safety first and ensuring a great user experience, and that's why we're expanding methodically. We are pleased that we've continued to broaden out our service in the Phoenix area and we're focused on expanding both the number of riders in the geographic reach around Phoenix. In addition, we're having conversations with a number of other interested cities and we are continuing to explore applying our technology for logistics and deliveries and for personal use vehicles and for last mile solutions for cities, so continuing to execute as we've described previously.

Operator

Thank you. And our next question comes from Mark Mahaney of RBC Capital Markets. Your line is now open.

Mark Mahaney

Thanks. Two questions. First, Ruth, could you just provide a little more color on the R&D expense build up. Anything unusual on there? Just comment on the cadence of that? Then, Sundar, on hardware that's -- it's been a multiyear effort. It seems like it's accelerated. There's a series of these new products we try to do a report on to make sure we understood them. Could you talk about how the strategic and maybe the synergistic impacts that you're seeing of hardware on the rest of Google's business, on the rest of Alphabet's business, and do you think that it's still early days and maybe paint a picture of how significant those synergies could be? Thank you very much.

Ruth Porat

So starting with R&D, the main driver is our ongoing investment in engineers, in particular, in Google and then as I said the sizable increase in accrued comp for Other Bets and just build that out a bit more, give you a bit more color, in certain Other Bets, employees are compensated through equity-based programs. And that's because we believe that this alignment of interest is valuable. We do assess valuation on an ongoing basis. And at a

minimum, we do a formal valuation assessment once every 12 months or when there is a significant event. And what you're seeing in the fourth quarter is the impact of higher valuation in certain Other Bets. And as we've talked about previously, a goal with the Alphabet structure is to enable us to build new businesses that would make a positive impact and create long-term value. And it's still early days we're very excited about the opportunities we see. And so what you're seeing is the impact here of valuation. The way we approach it is very consistent with the way startups are typically valued, and that includes technical progress and a range of other items.

Sundar Pichai

And Mark, on hardware, obviously, we are working hard to offer the best Google experience we can bringing together AI software and hardware. And you are right that it does have a lot of synergistic value, but at the stage where we're in. The main way we do that today for our core products is by using hardware to drive where the rest of the computing ecosystem is. And so we get a very leveraged effect there. But over time, as we scale up our hardware efforts and do it thoughtfully, so it definitely -- when I look at the kind of experience we can deliver. For example, if you look at something like the Google Home Hub and how it delivers a nice experience across Search, Assistant and YouTube and Photos when you wanted, you can definitely see the glimpse of the future. And so, we are investing to realize that.

Mark Mahaney

Okay. Thank you.

Operator

Thank you. And the next question comes from Stephen Ju of Credit Suisse. Your line is now open.

Stephen Ju

Okay. Sundar, just picking up on the AI for everyone theme, you've been highlighting at I/O as well as other venues. Are conversations with advertisers suggest that products like smart bidding are becoming a pretty - - increasingly popular tool to add to their bidding strategies. But how has the pickup been among the SMBs, especially among the local advertisers? Do you think you can target that market without a sales force? And secondarily, as we talk of two companies transitioning to a Cloud, there's increased talk of collecting data, dealing with data lakes as well as analyzing all that data to help their decision-making process. So from your standpoint running Google, do you feel like the current technology you have at your disposal is

sophisticated enough to keep up with all of the needs for you to run the company as you collect all the data from across the internet? Thanks.

Sundar Pichai

I think two questions. On your first question around using machine learning to help serve advertisers better and be able to reach newer advertisers, SMBs and local advertisers. I definitely think you highlight an exciting opportunity. Whenever we've done work like be it last year or the last couple of years through universal app campaigns or smart shopping campaigns last year, responsive search ads, those are all great examples of where we brought ML. And with that, we made process much easier for advertisers of all sizes and we see an impact. So I think it's a natural extension for us to continue working in that direction, and that will help us reach SMBs and local advertisers better over time. So I do think that's a good opportunity. And on the second part of your question, I want to make sure I understand it. If you're asking about how we invest in our security as a company, I think it's the foundation of how we do everything for the past 20 years. And we always -- we realize a deep responsibility that coming -- that comes with being stewards of users' data. So everything we design is designed with privacy and security in mind. It's where some of our core investments go, be it securing our data centers, literally the practices we have across the company, the quality and talent in our security teams and over time using AI itself to do all this well. So it's a core part of what we do and we take it very, very seriously.

Stephen Ju

Thank you.

Operator

Thank you. And our next question comes from Dan Salmon of BMO Capital Markets. Your line is now open.

Daniel Salmon

Hi. Good afternoon, everyone. Sundar, in your review of some of the shopping products during the fourth quarter, you didn't mention shopping actions. And there were reports there that Walmart decided to leave the program recently and I think there have been some public comments on social media from Googlers confirming that. So I would just love to hear a little bit more about that. But maybe more broadly the traction of shopping actions and, in particular, the price per sale metric that you rolled out with it during the holiday season. And then, Ruth, just a quick one for you, if we could return to your prepared remarks, there were a couple of sort of things

to keep in mind that you're highlighting. One was FX going from a tailwind to a headwind, but just before that you were talking about how new experiences can rollout over time to users. And I just wanted to clarify, were you referencing an experience that's rolling out currently, or just generally that that is a best practice in general for Google? Thanks.

Sundar Pichai

On shopping, I think we launched shopping actions around, if I remember, March of last year. And we've definitely seen a strong traction there. I think we've seen roughly a sevenfold increase in merchants in the program since we launched it. And just in Q4, we announced new partnerships with Best Buy, Nike, Sephora as an example. And in terms of Walmart, we have -- Walmart is one of our deepest partners and they remain a strategy partner across multiple businesses for us, including Google Ads and we have efforts underway to work closer together with shopping. But they are definitely a large partner who continue experimenting and we will support them in many ways. But I think, overall, I'm excited about the efforts we are doing in shopping and you will see us focus more there on 2019. We see users come to Google a lot around key shopping moments and we want to make sure we invest in the experience to get closer to what they want.

Ruth Porat

And then on the second question, we've talked about this on prior calls. We've often talked about the fact that we have been and remain committed to long-term revenue growth through innovation. And the point I was trying to underscore is the timing and scale of the impact. It's inherently difficult to predict. And so it can be inconsistent from quarter-to-quarter. The main point is we remain very excited about the opportunities for users and advertisers, in particular, building off of Sundar's comment as we apply machine learning to solutions.

Daniel Salmon

Great. Thank you, both.

Operator

Thank you. And our next question comes from Colin Sebastian of Robert Baird. Your line is now open.

Colin Sebastian

Great. Thank you. Two quick ones for me. First on Project Stream and YouTube TV. Just wondering how important it will be to invest in original

content as well as how you might view the rollout of 5G as catalyzing consumer adoption of these services? And then on the Discover feed, I know that's still pretty new, but curious if you have any color on usage and engagement to date? And if there's any way you expect to monetize that feed in the near future? Thank you.

Sundar Pichai

On Project Stream, being able to deliver gaming with the kind of real-time requirements, the low latency requirements, it's definitely for us -- it's an important computing advance. We think it will help us drive the newer computing platforms we're working on. And I do think, services like that will be a point of inflection as 5G rolls out as well. So I think it is a virtuous cycle. So we are excited. The early feedback our Project Stream experience has been super positive. And so we are looking to build up on that and you will see us do more there in 2019. On Discover, I think traction has been for us, we measure user engagement and satisfaction and happiness on these -- on anything new we do, and the metrics have been really strong. And we obviously -- we offer the best experience today on our products like Pixel, made by Google products. And we are looking to scale that up to reach more users. But we think we've a strong product there and I think it's very synergistic to search experience. And so we are looking to bring the best of both to our users, and you'll see us reach more users in 2019.

Colin Sebastian

Thank you.

Operator

Thank you. And our next question comes from Justin Post of Bank of America Merrill Lynch. Your line is now open.

Justin Post

Great. Thank you. A couple of questions. First, it looks like Google core margins were down about 3 points and what was an easier comp. So just wondering if you can give us any thoughts on how the core advertising business is doing in there? We know there's a lot of investment in Cloud and hardware and YouTube TV, but just would like to get a update on the health of the advertising business margins. And any thoughts on if you ever do segment disclosure. And then the second question is just on the Cloud strategy. There's been a pretty big leadership change. Just wondering if there's any new strategies or new things you will be doing this year with the Cloud related to the management change? And look forward to the Cloud Conference in April. Thank you.

Ruth Porat

Thanks. So, in terms of overall Google margins, I think that the main point you're seeing in the margins as we continue to see tremendous opportunity across Google, and so we're investing to support long-term revenue and earnings growth. We've talked a lot in this call already about the importance of machine learning and it is a key component of incremental investment, particularly, in CapEx for technical infrastructure to support the existing -- at the existing businesses, but also the newer ones, and that's kind of flowing through here. We've talked on prior calls that we're very mindful of the fact that CapEx turns into depreciation, which is why I single this out. We are continuing to see tremendous opportunity in the ads business, Search and Ads businesses and beyond machine learning we're further investing to continue to enhance the experience for users and advertisers, and that's across Mobile Desktop and YouTube. So, for example, a big priority in 2018 was expanding the availability of content for what we call the next billion user markets, which are for us a really important area. We are excited about the growth and the opportunity to deliver experiences across markets. We are also investing to enable more visual ways of finding information, such as photos and videos. And then, we are investing aggressively in our newer businesses within Google, particularly, Cloud and Hardware as Sunder has already said. So what you're seeing reflected through in the margins on the cost of revenue side is the impact of the product mix that we've talked about, a big part of that is the ongoing strength in YouTube and then on the OpEx side investing in engineers, in particular, for Google as well as on the sales and marketing side, the increased headcount to support not just Ads, but in particular Cloud.

Sundar Pichai

And on the second question on Cloud, I answered it around Anthony and Heather's question, but to add a little bit more color, while -- maybe it's the change in leadership, but it was a well planned transition. And so Diane and Thomas together planned 2019. And the big things you're going to see are, a continued focus on global 5000 companies. We are definitely seeing traction with large multiyear contracts, multimillion dollar contracts there. So you'll see us focused there. We will continue to invest in and expand our sales and distribution channels to meet customer demand, so that's going to be an important area for 2019. But mostly being highly focused on the 15 countries, 6 industries and the 5 major solution areas that we think will have the most impact and directing most of our resources towards those efforts is probably something you will see continued emphasis in 2019.

Justin Post

Thank you.

Operator

Thank you. And our next question comes from Ross Sandler of Barclays. Your line is now open.

Ross Sandler

Great. Two questions. First, there's a lot of discussion right now about alternatives to Google Play and Apple's App Store for distribution. And some of the large developers are starting to come up with these workarounds around the App Store fees. So, I guess, just philosophically, how do you think about the 30%? Do you think that's the right long-term rate for Google Play? And then, Ruth, coming back to the headcount and CapEx growth moderating comments, so you have expenses growing well in excess of revenue for some time in the core Google segment, and 2018 was the lowest operating income growth since you started disclosing the segments. So are you just flagging this as a change of direction? Is this a material change or is this just a small amount of moderation in 2019? Thank you.

Sundar Pichai

On Google Play, obviously, we do this at scale, thousands of developers rely on it to safely and seamlessly distribute their game to billions of android users worldwide. And we invest a lot in our infrastructure to continuously make sure their overall experience is safe and results in high engagement and for the developer's back. So I think there's a value exchange there and it's been the industry standard. And so, I think we will continue down that path and -- but obviously always adapt to where the market is.

Ruth Porat

And then in terms of the pace of investments, I've already laid out the focus areas and our commitment to continue to invest to support long-term revenue and earnings growth and just wanted to put a fine point on both CapEx and headcount. So on CapEx, as I indicated in opening remarks, we do expect the rate of year-on-year CapEx growth will slow meaningfully. So with the scale of our business and with our focus on user experience, it does require CapEx. We are committed to continue to invest in CapEx to deliver on that. In terms of the mix, we expect to see more of an uptick in 2019 in data center investments relative to servers. But the point which you asked in your question, the year-on-year growth rate will moderate meaningfully. And then, in terms of headcount, we are -- I was just trying to make clear that the growth in headcount will moderate somewhat here just so that there's no interpolation.

Operator

Thank you. And our final question comes from Brent Thill of Jefferies. Your line is now open.

Brent Thill

Thanks. For Sundar, the cash position has doubled the last five years to \$109 billion. Yet in the last four years M&A has been right around \$3 billion, which is well below your peers. And I'm just curious that it seems like the core is very strong, but is there hesitation that you're seeing in terms of valuation or other factors that are playing into that relative to what your peers are doing right now?

Sundar Pichai

I think, we've always approached M&A as I think really -- we are always evaluating opportunities. We've a very high bar, and so to me it's been more about us finding the right fit rather than being constrained by anything in particular. But I do think it's always an important part of our strategy and we've done great acquisitions in the past. Things like YouTube and android were big acquisitions for us. And so we continue to look for opportunities ahead.

Brent Thill

And real quick for Ruth, just the magnitude of spend, I think goes back to what probably investors were most surprised by. It sounds like from your perspective you don't really look at the margin structure as having any floor, you're just looking at this as, as you said there's tremendous long-term opportunity that you need to make these investments now. I think many are just trying to search for a framework in how you think about this investment cycle we are in right now?

Ruth Porat

So the reason I started by laying out, I think, in response to the question on margins where we're investing and how we look at it, we are very focused on investing to support long-term revenue and earnings growth. We are very mindful of the CapEx impacts on free cash flow and earnings growth. And so we're trying to get it right, over investing, under investing neither of those works for long-term value creation, but we are very mindful of the pace here and trying to lay out work with more specificity, how we are looking at the opportunity set where -- and making trade-offs where we can.

Brent Thill

Thank you.