

Operator

Good day, ladies and gentlemen, and welcome to the Alphabet Second Quarter 2019 Earnings Call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session and instructions will be given at that time. [Operator Instructions]

I'd now like to turn the conference over to Ellen West, Head of Investor Relations. Please go ahead.

Ellen West

Thank you. Good afternoon everyone and welcome to Alphabet's second quarter 2019 earnings conference call. With us today are Sundar Pichai and Ruth Porat.

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 maybe 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 non-GAAP to GAAP measures is included in today's earnings press release, which is distributed and available to the public through our Investor Relations website located at abc.xyz/investor.

And now, I'll turn the call over to Sundar.

Sundar Pichai

Thanks Ellen. Q2 was an exciting quarter at Google. We made several big announcements at I/O, YouTube's Brandcast, and Google Marketing Live. They're all part of our broader vision to build a more helpful Google for everyone. When we say everyone, we mean users, developers, creators, partners, advertisers, and all the customers of our growing cloud business, and the communities we call Home.

From the beginning, Google's mission has been to organize the world's information and make it universally accessible and useful. Over the years, we have evolved from a company that helps people find answers to a company that helps you get things done. Today, I'll share how we are approaching this work.

Building a more helpful Google starts with advancing our core information mission. In Q2, we have made a number of improvements to our founding product, Search. We redesigned our mobile search page and brought our popular full coverage feature to search to better organize news results.

We are also integrating augmented reality into Search. So, if say, you're searching for new shoes online, you can view the shoes in 3D or even superimpose them onto your wardrobe to see if they match.

Thanks to advancements in AI, we are making significant improvements to the Google Assistant. The next-generation Assistant, can process requests up to 10 times faster, making it easier to multi-task, compose e-mails, and even work offline. With features like Duplex on the web, that system will soon be able to help users book rental cars and buy movie tickets.

If you are searching for the fastest way home, Google Maps will now tell you when your bus is delayed or how packed your next train will be. We have rolled this out to people in 200 cities worldwide.

Google Maps can also help people stay safe in times of crisis. Last month, we added more visual information and a new navigation warning system to help you understand where the natural disaster is and better anticipate where it may be headed.

Building a more helpful Google for everyone means that everyone should be able to access and enjoy our products. That's why we are applying the latest advancements in AI to dramatically improve experiences for people with disabilities. One example of this is captions, which make content more accessible to the almost 500 million people in the world who are deaf or hard of hearing.

In Android Q, we can now add automatic live captions to any media playing on your phone such as videos, podcasts, and voicemails. We are also developing technology for the next billion users coming online in places like India, Brazil, and Indonesia. Yesterday, we introduced the gallery Go App. It's a way for people living in low connectivity areas to manage their photos and videos while offline.

Google Photos continues to be one of our most popular and beloved products, now with over one billion monthly users, and we are excited by the potential of Gallery Go to bring these benefits to the next billion users.

Building for everyone also means ensuring that privacy is equally available to everyone. In Q2, we announced privacy improvements to give users clear choices and more control around their data. We're making privacy controls

more easily accessible, expanding our popular incognito mode to maps and adding new auto delete controls.

And we continue to challenge the notion that products need more data to be more helpful. For example, we invented a new technique called federated learning that allows us to train AI models and make products smarter without raw data leaving your device.

To make products work even harder for you, we have continued to invest in our hardware business, bringing together the best of Google's hardware, software, and AI. At I/O, we introduced some new additions to our hardware lineup including Pixel 3a and Pixel 3a XL. By taking advantage of our leading software capabilities, we can offer users a premium phone experience at a much lower price point.

With the launch of Pixel 3a in May, overall Pixel unit sales in Q2 grew more than 2x year-over-year. In addition to Verizon and the Google Store, we successfully expanded our distribution to T-Mobile, Sprint, U.S. Cellular, Spectrum Mobile, and additional partners which has greatly diversified our sales footprint in the U.S. Finally, we're also pleased that the Pixel 3a launch was met with their highest Net Promoter Score ratings to date.

We are also doubling down on creating a helpful Home, bringing all of our Home products together under the Nest brand. In Q2, we launched the Nest Hub in 12 additional countries. Demand across our helpful Home products continues to increase as we expand to new markets.

Our new Google Nest Hub Max, a voice activated smart display powered by the Google Assistant will be available later this summer. Stay tuned for even more on hardware this fall.

Beyond hardware, we continue to develop the open platforms and ecosystems that push computing forward such as Android, Google Play, and Chrome. At I/O, we showed some exciting improvements to Android Q. It's the first operating system to support 5G, includes support for foldable phones, and has nearly 50 updates focused on security and privacy, including more transparency and control over the location data you share with the apps.

And we continue to feel the excitement from users, developers, and publishers following the announcement of our new gaming platform Stadia. We recently announced pricing, availability and over 30 games coming to Stadia, in time for the consumer launch in November.

Another area that we are investing deeply is YouTube. Every day, users come to YouTube to learn new things. As a result, YouTube has become one

of the world's most accessible educational platforms. We see strong growth in a number of areas. Creators continue to build engaged fan bases on YouTube. Channels with more than 1 million subscribers grew by 75% year-over-year.

Thousands of channels have doubled their total monthly revenue, by using new monetization products, like Super Chat, Channel Memberships and merch. And we are building momentum with our subscription services. YouTube Music and YouTube Premium now available in over 60 countries, up from five markets at the start of 2018.

At Brandcast, we introduced two important changes that help advertisers reach new audiences with premium content. First, new YouTube Original series, movies and live events will soon be made available for free, supported by ads. Second, YouTube TV with its 70-plus channels will be accessible as a standalone lineup in Google Preferred.

As we continue to invest in the platform, responsibility remains our top priority. One significant change we made in Q2 was to update our hate speech policy. And we continue to be vigilant about removing harmful content quickly and at scale. In the first quarter alone, we removed more than 8 million videos that violated our community guidelines.

The vast majority of those videos were flagged by machines and removed before getting a single view. We are also working to raise-up high-quality content and support our creators who are our next generation media businesses. These are a few of the many investments we have made to protect the community. The work is ongoing and we are committed to it.

Moving from YouTube to broader advertising platforms, at Google Marketing Live we introduced new ad formats such as Discovery ads, which offer a new visually rich mobile-first ad experience across Google properties. We also announced a unified shopping experience and universal shopping cart, all of which help to make Google more shoppable. We also announced Google Travel, a new centralized travel destination where people can plan and organize all aspects of their next trip all in one place, from booking flights and accommodations to planning activities.

Now on to our Cloud business, Q2 was another strong quarter for Google Cloud, which reached an annual revenue run rate of over \$8 billion and continues to grow at a significant pace. Customers are choosing Google Cloud for a variety of reasons. Reliability and uptime are critical. Retailers like Lowe's are leveraging the Cloud as one of the important tools to transform their customer experience and supply chain.

Customers need flexibility to move to cloud in their own way. Anthos, announced earlier this year, provides advanced security and open architecture to support multi-and hybrid Cloud environments. That's important to many companies, including financial services customers like HSBC and new clients such as KeyBanc.

Scalable data management and analytics solutions are another strength of Google Cloud. Vodafone is using cloud to drive real-time customer and network analytics. And BrightInsight, a leading healthcare platform for connected devices and drugs, uses our solutions to improve security and compliance.

Finally Google Cloud's AI and ML solutions are also helping healthcare organizations, like Sanofi, accelerate drug discovery and as such, improve the healthcare experience and outcomes. We continue to build our world-class cloud team to help support our customers and expand the business and are looking to triple our salesforce over the next few years.

Finally, to support our rapidly growing cloud customer base and all of Google services globally, we broke ground on three data centers and launched our new Osaka Cloud region, the seventh in Asia Pacific. We also announced plans for a new Cloud region in Las Vegas, our seventh in the United States.

Lastly, beyond investments in products, we are investing significantly in the communities where we operate. In Europe, we recently announced €1 billion data center investment in the Netherlands, as well as the opening of our Google Safety Engineering Center in Munich Germany.

And right here at home, we announced a \$1 billion investment in housing across the Bay Area to help address the chronic shortage of affordable housing. Earlier this week, we invested \$50 million in Housing Trust Silicon Valley's TECH Fund, which furthers our goal to help communities succeed over the long-term and expands access to housing for those who need it most.

Finally, I'm excited that Google is an official supporter of the Olympic and Paralympic Games Tokyo 2020. It's particularly special, since that's where we opened our first international office back in 2001. Ahead of the games, we are working with the City of Tokyo to ensure Japanese businesses can better serve new customers and help visitors make the most of their time there using products like Search, Maps and Translate.

At Google, we feel incredibly privileged to have the opportunity to help so many people everyday in moments big and small. There are many reasons to be optimistic about the direction technology is taking, from the applications of AI to address disease, to the potential of quantum computing,

to deepen our understanding of the world. I want to thank Googlers around the world for another great quarter.

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

Ruth Porat

Thank you, Sundar. In the second quarter, total revenues of \$38.9 billion were up 19% year-on-year and up 22% in constant currency. Once again, our results were driven by ongoing strength in mobile search, in particular, as well as YouTube and Cloud.

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 we'll include with our outlook. We will then take your questions.

Let me start with a summary of Alphabet's consolidated financial performance for the quarter. Our total revenues of \$38.9 billion reflect an acceleration in both reported and constant currency revenue growth across all regions compared with the first quarter. Details of our results by geographic region are available in our earnings press release.

Turning to profitability. On a consolidated basis, total cost of revenues, including TAC, which I will discuss in the Google segment, was \$17.3 billion, up 25% year-on-year. Other cost of revenues on a consolidated basis was \$10.1 billion, up 35% year-over-year, primarily driven by Google-related expenses.

The biggest contributor was costs associated with our data centres and other operations, including depreciation, followed by content acquisition costs, primarily for YouTube, and mostly for our advertising supported content, but also for our newer subscription businesses YouTube Premium and YouTube TV, which have higher CAC as a percentage of their revenues. This line was also impacted by growth in hardware costs, associated with the launch of our line of mid-tier Pixel 3a smartphones.

Operating expenses were \$12.5 billion with headcount growth as the largest driver across each of R&D, sales and marketing, and G&A. The biggest increase, once again, was in R&D expenses reflecting our focus on product innovation. Growth in sales and marketing expenses also reflects an increase in advertising and promotional expense, primarily for the launch of our Pixel 3a lineup.

Stock-based compensation totalled \$2.8 billion. Headcount was up 4,187 from last quarter. And consistent with prior quarters, the majority of new

hires were engineers and product managers. In terms of product areas, the most sizable headcount increases were again in cloud for both technical and sales roles.

Operating income was \$9.2 billion, up 13% year-over-year, excluding the impact of the EC fine in the second quarter of last year for an operating margin of 24%. Other income and expense was \$3 billion, reflecting sizable gains, which are primarily unrealized from investments made by CapitalG, GV and more broadly at Alphabet. We provide more detail on the line items within OI&E in our earnings press release. Net income was \$9.9 billion and earnings per diluted share were \$14.21.

Turning now to CapEx and operating cash flow. Cash CapEx for the quarter was \$6.1 billion, which I will discuss in the Google segment results. Operating cash flow was \$12.6 billion with free cash flow of \$6.5 billion. We ended the quarter with cash and marketable securities of approximately \$121 billion.

Let me now turn to our segment financial results. Starting with the Google segment. Revenues were \$38.8 billion, up 19% year-over-year. In terms of the revenue detail, Google Sites revenues were \$27.3 billion in the quarter, up 18% 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 \$5.3 billion, up 9% year-on-year, continuing to reflect the performance of the primary drivers of growth within network, namely Google Ad Manager followed by AdMob. Other revenues for Google were \$6.2 billion, up 40% year-over-year, fuelled by Cloud with an ongoing strong contribution from Play.

Within Cloud, growth in GCP was once again in the primary driver of performance, with strong customer demand for our compute and data analytics products. G Suite continues to be a valid set of productivity and work transformation apps with the results benefiting from both new pricing and seed growth.

Play's results were driven by strong growth in a number of active buyers. Hardware benefited from the successful launch of our Pixel 3a smartphones. We 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 \$7.2 billion or 22% of total advertising revenues, and up 13% year-over-year. Total TAC as a percentage of total advertising revenues was down year-over-year reflecting primarily a favourable revenue mix shift from network to sites. The sites TAC rate

increased year-over-year, primarily due to the impact of the ongoing shift to mobile, which carries higher TAC, offset by the growth in TAC free sites revenues, primarily from YouTube. In Q2, the network TAC rate declined year-on-year, primarily due to a favourable product mix shift.

Operating income was \$10.4 billion, up 16% versus last year and the operating margin was 26.8%. Accrued CapEx for the quarter was \$6.9 billion, reflecting investments in office facilities and data centres followed by service.

Let me now turn to and talk about Other Bets. Revenues were \$162 million, primarily generated by Fiber and Verily with an operating loss of \$989 million. I'll note a couple of key recent accomplishments. Waymo now has over 1,000 active writers participating in Waymo One and has reached 10 billion miles driven in simulation. Waymo also announced that it has entered into an exclusive partnership with Renault and Nissan to explore driverless mobility services for passengers and deliveries in France and Japan.

Loon was once again able to step in and provide connectivity in the aftermath of a natural disaster after the recent earthquake in Peru. This follows previous deployments of Loon after hurricanes in Puerto Rico and floods in Peru.

Let me now conclude with some comments about our longer-term outlook. Based on the strength of the U.S. dollar to-date relative to the third quarter of last year, we expect continued FX headwinds again in the third quarter. As a reminder, FX headwinds affect both revenues and operating income given the majority of our expenses are in the U.S.

Turning to revenues. We are pleased with the ongoing momentum in our revenue growth, especially on a base of nearly \$150 billion in revenues over the last 12 months.

With respect to Sites revenues, the strength in the second quarter again reflects our ongoing innovation in part from the benefits of applying machine learning. We remain confident about the ongoing opportunity set. And within other revenues, once again Cloud was the largest driver within other revenues and the third largest driver of revenue growth for Alphabet overall.

In fact, in the second quarter of 2019, as Sundar mentioned, the annual run rate for Cloud revenues was over \$8 billion and Cloud continues to deliver significant growth. In terms of our hardware business, we were pleased with the reception of the Pixel 3a line-up of mid-tier smartphones in the second quarter and look forward to the fourth quarter launch of our newest devices, some of which we showcased at I/O.

Turning to profitability. With regard to Google operating expenses, the second quarter results once again reflect our ongoing commitment to investing for the long-term. At this point, we expect that our 2019 headcount growth rate will be closer to the 2018 rate, in other words slightly higher than we originally forecast for a couple of reasons. Strategically, we are increasing our hiring in Cloud and are incorporating the impact of the Looker acquisition, which we expect to close before the end of this year.

And operationally, we're taking steps to optimize workforce deployment by moving certain customer support functions in-house, which is both OpEx neutral and enhances operational effectiveness. As a reminder, headcount additions tend to be seasonally higher in Q3, because that is when we bring on new graduates.

In terms of sales and marketing, consistent with prior years, we expect sales and marketing to be more heavily weighted to the back half of the year to support the holiday season. In Other Bets, we continue to invest meaningfully for the long-term opportunity we see.

Turning to CapEx and capital allocation. To give you more insight into our investment and capital expenditures, I will discuss the two major components of Google CapEx separately. First, the majority of our Google CapEx is what we refer to as technical infrastructure, which consists of our investments for compute, storage and networking requirements and includes data center land and construction, servers and network equipment.

The second category of CapEx is for our office facilities, including acquisitions, ground-up development projects and related building improvements. In the last couple of years, within Google CapEx, on average approximately 70% was for technical infrastructure and 30% was for office facilities.

Both, the split between the two components and year-on-year growth rates, can vary significantly from quarter-to-quarter, due primarily to the timing of sizable purchases of office facilities. For example, in Q1, technical infrastructure was about 80% of Google CapEx; whereas in Q2, it accounts for about 60% due to the purchases of office facilities we made in the quarter.

As we discussed on the fourth quarter call, we believe there are two important factors when considering our pace of CapEx investing. First, we expect the overall growth rate will moderate quite significantly for the full year 2019 versus 2018. Second, in terms of the mix within technical infrastructure, we expect to see more of an uptick in 2019 in data center investments relative to servers in contrast to the ranking in 2018. Growth in

technical infrastructure is designed to support, in particular, our efforts in machine learning across our businesses as well as to support growth in Cloud, Search and YouTube.

With respect to capital allocation. Our primary use of capital continues to be to support organic growth in our businesses, followed by retaining flexibility for acquisitions and investments. We complement these growth drivers with a return of capital. As we indicated in our press release today, our Board has authorized the repurchase of up to an additional \$25 billion of our Class C Capital Stock. In conclusion, we are confident about the opportunities ahead and continue to invest thoughtfully for the long term.

We will now take your questions.

Question-and-Answer Session

Operator

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

Eric Sheridan

Thanks for taking the question. And really appreciate all the additional commentary and disclosure in the remarks. I think investors will find that really helpful. Sundar maybe could you, one bigger picture question. A lot of innovation on the product side in the early part of this year. Now those products are going to start getting rolled out in the back part of this year and into 2020. Can you give us a little bit of additional color on what some of the key investments you're making, some of the key themes you're trying to drive after in terms of pushing the organization to collaborate on product launches and leveraging the strength within Google?

And then the second part of the question would be, as you lower friction for consumers on the product side, what are you hearing from advertisers on the monetization site about how those product might resonate on the monetization piece? Thank you so much.

Sundar Pichai

Thanks Eric. On -- in terms of the key investments, we still continue. We have been focused on our investments in AI. So that continues to be kind of a foundational investment we are making across the board, including getting a lot of our engineers trained on AI techniques et cetera across the board. So it's an important area we are focused on. And making sure, digging

deeper to push our products to be more helpful is the main theme, by which we are evaluating everything we do.

Beyond that be it, the focus on cloud has been a big part of it, continuing to scale up YouTube including being focused on content responsibility. These are all some of the key things we are doing. And of course deep focus on Search and Assistant being a core part of everything we do.

In terms of the work we are doing on consumers and the impact it has on monetization. And I do think they go hand-in-hand as we are making the experience better for customers, including on products like Discover. So just getting information to them more seamlessly when they need it, I think they all tend to have a commercial aspect at the right intent when users are interested in it. And so we always see them go hand-to-hand. And so taking a long-term view, I think it will resonate on the monetization side as well.

Ruth Porat

And just building a bit of that question and the impact from some of the announcements that you've seen from us. To just comment a bit on the impact from Google Marketing Live that Sundar referenced at the outset. I think what's notable here is that every year at GML, we announced new changes to products and features and most ads product launches are introduced in phases as advertisers initially experiment with new formats. And so as a result the new products that were announced at GML typically are adopted over time.

And so I just wanted to add in here because while we're excited about the new ads products we announced to GML last quarter, given they offer great new user experiences across new services, we don't view this year's slate of launches differently from introductions made in previous years.

Eric Sheridan

Thank you.

Operator

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

Douglas Anmuth

Great. Thanks for taking the question. I was just hoping Ruth, you could just talk a bit more about the accelerating growth that you saw in 2Q relative to the slowdown that we saw in 1Q. It seems certainly in the previous quarter

to skew more to the Google Search site than YouTube. I was just hoping you could provide little more clarity on maybe how the product changes that you've talked about in the past played out across 1Q and 2Q. And then just Sundar on user privacy and control over data, that was certainly a key theme across the multiple events in 2Q. Can you just talk about how you balance those initiatives as you're rolling out products going forward? Thanks.

Ruth Porat

So, starting first with the strength in sites revenue. The strength we talked about here this quarter reflects the same underlying trends that we discussed previously. And I tried to really call that out in opening comments. And part is the benefit from applying machine learning to both the user and advertiser experience. And it really just -- I'm echoing a lot of what we said in prior quarters the last quarters where we remain very positive about the opportunity set.

We introduced product changes only after extensive testing, which means there can be some variability in quarterly growth rates as you've seen, but are very positive about the opportunity set. And overall as it relates to both Search and YouTube strength, I would just to add on YouTube revenue growth for YouTube was strong in the first quarter. In fact, we called it out as the second largest driver of revenue growth across Alphabet. And in the second quarter, YouTube was again the second largest contributor of revenue growth. And really pleased with the ongoing momentum that we're seeing here.

Sundar Pichai

On user privacy and control, it's always been a big focus for us in some of the things we recently announced. Initiative is underway for example like federated learning for almost three years. So, going forward, I think you'll continue to see us focus on. I think it's one of the most important areas we are working on. But I think with AI, we are excited that we can give better experiences for users with less data over time. And those are the kind of directions we are pushing. We are also -- you'll see us continue to work hard to simplify user understanding of how their data is used and giving them better controls and making it more easy for them to manage and making sure more users actually exercise those controls. So, those are all our goals and we'll continue focusing on that as we move forward.

Douglas Anmuth

Thank you both.

Operator

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

Stephen Ju

Okay. Thank you. So, Ruth in regards to the Cloud \$8 billion annual run rate commentary, just wondering if we can get some clarifications there. Does this include GCP as well as G Suite?

And further is this apples-to-apples to I guess the \$1 billion that you -- I think Sundar talked about, I think that was during the fourth quarter of 2017. And any other comments you can add there in terms of the mix between I guess the more GCP versus the more traditional G Suite? Thank you.

Ruth Porat

Yes. So, it does include the entire business that Thomas Kurian is leading. Our Cloud business that includes both GCP and G Suite. And it is on an apples-to-apples basis. It continues to be the business the cloud business.

We're not breaking out the components of cloud as I tried to indicate in opening comments, pleased with the performance of both GCP and G Suite. Growth in GCP was led by strong customer demand for our compute and data analytics products and G Suite continues to deliver strong growth, as I noted in the opening comments, with the results benefiting from both new pricing and [C] [ph] growth.

And overall, GCP remains one of the fastest growing businesses in Alphabet and we're really pleased with how the team is executing on both.

Stephen Ju

Thank you.

Operator

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

Heather Bellini

Great. Thank you very much. And I'll just echo people's comments about the new disclosure. That's much appreciated. So thank you so much for sharing.

I wanted to ask, Sundar, how you've seen your go-to-market and partnership strategies change under Thomas?

It does seem that Google has become the more friendly cloud company, if you will, from a -- when you think about partnering with other software companies. And I'm wondering if there's any tangible benefits you can point to because of this, whether it's in win rates or partner momentum or anything else that you can call out.

And then, I also wanted to ask, you obviously made the acquisition of Looker recently. How are you thinking about organic versus inorganic product development? And I'm just wondering, has the thought process there changed with Thomas running the business now? Thank you.

Sundar Pichai

Thanks, Heather. I appreciate it. Definitely go-to-market, Thomas has been heavily focused on it. Mainly with the realization that we are very competitive when we are there in the banks. And so, focusing on how we can scale up and really build a customer-facing organization.

So, we are investing heavily, be it in sales, service, partner and operational teams. And as I mentioned in my opening comments, we are looking to triple the size of our sales force over the next few years. And we are doing it aggressively in major markets around the world.

Some specifics, we did launch our new partner program Partner Advantage. The ASAP relationship has been super important to us. And so, we have really focused on that, helping many customers make us care for. Home Depot, Cardinal Health, are some examples of that. And a big part of it has been really expanding our customer-facing bench.

Several new senior executive hires in addition to our new Global Head of Sales. We recently added a 25-year customer experience veteran to build out our customer support. So I think, you're good to see that focus of being -- serving customers. We have done it in our other areas. We are used to building ecosystems. If you look at an ecosystem like Android, this is what we do. And so, that's going to be a focus for us.

In terms of the second question about organic and -- versus inorganic. I think we are clearly focused on the areas where we are differentiated. Data and business analytics was a key, data management and analytics is a key area for us. And as part of that, we looked at gaps we have, which would help us complete the solution offering we have there for customers.

And that's what drove the Looker acquisition. So we'll be customer focused. And to the extent we see gaps there -- gaps anywhere, we'll obviously look at doing it in-house, versus whether there's an attractive opportunity outside and take it on a case-by-case basis. But that's where it will come from.

Heather Bellini

Thank you.

Operator

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

Mark Mahaney

Can I try two questions, please. Ruth - first, Ruth, just any color on that 25 billion share repurchase authorization, why 25, not 20, not 30, any color there. And then, when you think about ad business. We've seen this nice acceleration in Q2, but that's kind of back to norm. There's still this question about what happened in Q1. Was there something that happened in Q1 that you needed to correct in Q2? Is it just the normal rhythms of the search in YouTube and advertising businesses? So I find Q1 still a little bit of a question mark. Q2 seems like very much the norm with the last several years. So any color on what could have transpired in Q1 then that required a fix in Q2? Thanks a lot.

Ruth Porat

I'll answer them in reverse order. I tried to comment on that last quarter and reiterated again this quarter. We are pleased with the ongoing momentum in the business. And the key point that I'll just reiterate is that as much as there is a lot of innovation going on in the business and we've talked about that, we introduced product changes only after extensive testing and that means there can be variability in quarterly growth rates as you've seen.

And so we're pleased with the strength of the business. The team is extremely focused on ensuring we're delivering for users and advertisers. And as we're looking out, we talked in the past we have introduced over 100 enhancements to the user set every quarter and no unchanged drives results.

And as we discussed last quarter, there can be timing variability and our view is let's ensure that we stay focused on the right things for the long-

term and the quality that we can deliver. So there's really not much more to add there.

And then on the capital return. I guess, the main point is we went back to this year, we're staying with the same capital allocation framework we've talked with you about before. The primary thing is we remain focused on investing for long-term growth and the primary use of capital really is to support that growth.

And then the second use is really to support acquisitions and investments as we've already been talking about. And given the -- our outlook on cash, our view was that it was appropriate to step in here again. We've increased our program four times since we began the program in 2015, and pleased to have the opportunity to announce another increase here today. The \$25 billion and I think the main point is we view the repurchase program as an effective use of capital.

Mark Mahaney

Okay. Thanks, Ruth.

Operator

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

Brian Nowak

Thanks for taking the questions. I have two. The first one, Ruth your color on YouTube was really helpful on being the second largest driver this quarter and last quarter. I guess with that as a backdrop with the overall acceleration, can you just give us a couple examples, what types of products or advertisers segments or regions resonate particularly well on YouTube this quarter versus last quarter?

And then a question for Sundar or Ruth. This has been recent announcement in press about children safety on YouTube. And so I guess I'm just curious to hear for advertisers and parents on the call, what steps have you taken to really make sure that YouTube is safe for kids. And what are the biggest areas you're focused on to make sure it stays that way? Thanks.

Ruth Porat

So in terms of YouTube growth, just maybe to add a bit more there given your question. I already noted that YouTube revenue growth was strong in the first quarter and again strong here in the second quarter.

To clarify, the changes in early 2018 that I referenced on the call last quarter, regarding sites click and CPC growth were not related to policy enforcement actions at YouTube. They had a negligible impact on YouTube revenues. Just to be a really clear. The revenue growth was strong last quarter. And so the click and CPC growth are unrelated to actions on policy enforcement in terms of our ongoing efforts to protect the YouTube ecosystem, we do remain focus and taking the right steps in line with our goals, regardless of impact on the revenues. But an important point is to the removal of content that violates our policies have virtually no impact on YouTube revenues. I just wanted to make sure that was clear. So, consistent growth here.

Going into your -- the first part of your question. Where is that growth? Again, I'm going to reiterate what we've talked about on prior calls that we continue to see substantial growth in direct response. So, brand advertising is still the largest part of the business. It's growing at a strong pace. But really I would reiterate what we said previously that we continue to see substantial growth in direct response.

Sundar Pichai

And on your important question about kids' safety, as part of our content responsibility work it's one of the most important areas we focus on. You will see us -- this is why we have put a lot of effort into developing YouTube Kids and it's a product you're going to see us focus more and continue to evolve, add more curated content there, and make sure it's safe for kids and give parents peace of mind.

Also ensuring that the content responsibility work applies to family-oriented content on the main YouTube app as well. So, all the work we are doing be it the work we are doing to just remove that content raise up authoritative content higher quality content and reducing the step of harming content all applies everywhere and we're really focused on it. Rewarding trusted creators is a big way we can help -- ensuring greater to produce content which is great for children rewriting them. It's also an important goal for us.

Brian Nowak

Great. Thanks.

Operator

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

Dan Salmon

All right. Good afternoon everyone. Thanks for taking the question. Maybe that's for Ruth, but Sundar feel free to jump in. The first one here is based on a couple of comments you reminded us in your prepared remarks about YouTube which was the inclusion of Originals and YouTube TV in the Google Preferred inventory.

You've given us a little bit of color on direct response growth at YouTube over the last little while. Can we assume that those two additions were a bit of a boost to the brand advertising side of the business as that's more inventory available for that for that sort of high-quality type of brand orientation that TV advertisers are looking for?

And then just second coming back to Google Marketing Live notwithstanding your comments Ruth that it take some time for products to be adopted. There are maybe one or two out of those announcements there that you would highlight as being potentially particularly material over the longer term? Thank you.

Sundar Pichai

On the first in terms of YouTube for brand, I would say it's more secular across the platform promoting higher-quality content, our work on brand safety, content, responsibility adds up to it. Also creators just generating better content. I think all have played a part and I would say it's more crosscutting.

On the second thing on Gmail in terms of things we were excited about. To me be discovery ads and gallery ads, I mean they're both pushing us towards mobile first visually-rich immersive ad formats, which also offers a really great user experience. So I think I'm excited about changes like that and I think they have the potential. There is advertiser excitement. But as Ruth mentioned it's early days and I think we rollout now, it takes time to play out. But we definitely see excitement there.

Dan Salmon

Great. Thanks, Sundar.

Operator

Thank you. And our next question comes from Mark May from Citi. Your line is now open.

Mark May

Thank you. Well, first is for Sundar. I think earlier Ruth had mentioned the importance of machine learning for driving growth in the quarter, and I'm sure in many recent quarters. I believe many have a hard time understanding exactly what that means. And I was hoping you might provide a couple of specific examples of how the company is leveraging machine learning recently to help drive growth and improvements for both users and advertisers?

And then secondly for Ruth in terms of the sites TAC, I know there are a lot of variables that go in the changes in sites TAC. But when you look at the puts and takes, how do you see that trending over the next year or two? Thanks.

Sundar Pichai

For us, machine learning plays a critical role across both the consumer user experience and part of ads too. Generally using machine learning to simplify things for advertisers and make campaigns easier and give them better insights is where we see a lot of benefit on the ad sites. So, for example, processing complex datasets and giving back sophisticated real-time insights really helps make a difference. And also on the front end for marketers, helping them find the right creator for every moment, helping them manage bidding in real-time. And so every step in the consumer journey, I think machine learning is just making things more efficient, more easier to use and driving productivity for them. So that's what plays out through our systems.

Ruth Porat

And in terms of the TAC rate. As we've talked about previously, the growth in mobile does put upward pressure in the sites TAC rate and that was the primary driver of the year-on-year increase in the second quarter. And we do expect the underlying trend to continue given the ongoing growth in mobile.

Mark May

Thanks

Operator

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

Colin Sebastian

Thanks. A couple for me as well. First off, as you embrace more commerce and payments on the platform broadly speaking along with the new ad formats you've talked about, can you also talk about what role take rates might play in terms of future initiatives and revenue growth?

And then secondly on Assistant and Duplex, in terms of near-term Search innovation, I wonder if you could characterize how important that is in terms of the momentum you're seeing and longer term, how this might impact platform monetization? Thank you.

Sundar Pichai

On the first question, I think it's a good question. There's a lot of discovery that happens across Google's properties and including Search and YouTube. And so anything we can do to make sure users have a better experience when they are interested in transacting will have a big role.

So there's a lot more work underway to make sure payments work better. Sign in works better. Payments works better. All of that I think will be -- over the long-term will be drivers, because it improves overall user expense especially for commercial clicks.

In terms of Assistant and Duplex, I mean, for us Assistant is where we can clearly see we can really push our goal of being more helpful to users, helping them get things done, including things that matter in the real world. And so, that's what we are focused on. And if we get that right, just like with the Search, there are many things which users want to get done, which do have commercial intent to them. And I think that's the value-creation opportunity as well. But we are focused on making sure the user experience constantly gets better and we are investing to get there.

Colin Sebastian

Thank you.

Operator

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

Justin Post

Great. Thank you. Sundar, there's been a lot of regulatory news lately, especially from the DOJ. Just wondering how you think about a more intense regulatory environment. Getting a lot of questions and wondering, if you think about that, really affecting Google operations. And then, Ruth,

definitely nice acceleration across the board. Of course, Europe accelerated as well. When you think about GDPR implementation last year and you're lapping that, is that helping Europe at all? Or was there really no impact from GDPR? Thank you.

Sundar Pichai

On the regulatory question, we understand that there will be scrutiny. We are - we will engage constructively. It's not new to us. We have participated in these processes before. Today we do operate under a lot of regulation, be it on privacy, be it on competition, be it on copyright, intellectual property, et cetera.

And even in the U.S., we have engaged in the process before to the extent we have to answer questions, we will do so constructively. And to the extent there are concerns, we'll address them as well. But I think, for me, it's important that we stay focused on building helpful products to users and that's the value we ultimately provide our users. And I think that's what we'll stay focused on as a company.

Ruth Porat

And in terms of GDPR, we did implement late in the second quarter of 2018. We think it's, obviously, a critical area, making sure we get it right. That's at the overall impact of regulation on consumers and businesses, is it still playing out. And we're very focused on making sure we're doing what's best for users and ensuring we're compliant with the law, not based on any potential revenue impact.

Justin Post

Thank you.

Operator

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

Ross Sandler

Hey guys. If I can squeeze two in real quick. Ruth, the Google segment operating profit was up 16%. That's the highest growth rate in about two years. So, I guess, how should we think about the cadence of that relative to your comments about the headcount growth in the Looker acquisition looking forward?

And then Sundar, at I/O you mentioned that active Android installed base is now over 2.5 billion. That's up about 10% year-on-year and a lot of that's coming from emerging markets. So, I guess, just big picture, how do we think about the growth rates that you can sustain in mobile search revenue relative to that 10% active Android growth rate? Thank you.

Ruth Porat

Yeah. Thanks for that. I tried to enumerate the things as we're looking forward very much to your question. Our overall long-term investment thesis is unchanged. We are very focused on investing to support the ongoing growth we see across Google in particular as we're talking about in Search while we're also investing to build new businesses most notably in Cloud as we've talked a lot about here today.

And across all of Alphabet, we do continue to benefit from machine learning that's both OpEx and CapEx. And as we both commented given the opportunities we see with the application of machine learning across the business, we are continuing to invest.

Our lens on the pace of investing does have three facets in it. First is investing at the appropriate pace to support long-term earnings growth. And then we were very focused second on optimizing investments within each product area. And finally, as we've talked about investing to support operational excellence.

But the mega point is that we are excited about the long-term opportunity and we're continuing to invest which is why in opening comments, I wanted to make sure to call out what we're seeing with respect to ongoing investments and across the business the increases in headcount and the reasons for them at the benefits of those investments as well as sales and marketing and the fact that that is back half loaded and -- back half weighted I should say. And so try to lay out the relevant points for you to ensure that we make it very clear. We are committed to continue to invest for what we see as a long-term opportunities.

Sundar Pichai

And on the mobile question, we are definitely investing in Android with a focus on the next billion users as well as making sure the mobile experience continues to evolve. In terms of the mobile experience, I still think from a user standpoint, there's a lot of information overload. So, being helpful to users and helping them navigate it be it Search, Assistant, Maps, and YouTube I think we are focused on the opportunities there.

And in terms of the next billion users there's a lot of headroom there over time and we are focused on. That's why we take efforts like Android Go seriously. We are constantly working hard to lower the barrier so that more people can benefit from being online and participating in the digital economy and so it will continue to be a focus for us.