

Company Name: Alphabet Inc  
Company Ticker: GOOGL US  
Date: 2017-07-24  
Event Description: Q2 2017 Earnings Call

Market Cap: 742,606.23  
Current PX: 1073.21  
YTD Change(\$): +19.81  
YTD Change(%): +1.881

Bloomberg Estimates - EPS  
Current Quarter: 12.365  
Current Year: 43.196  
Bloomberg Estimates - Sales  
Current Quarter: 25554.167  
Current Year: 88871.344

## Q2 2017 Earnings Call

### Company Participants

- Ellen West
- Ruth Porat
- Sundar Pichai

### Other Participants

- Eric J. Sheridan
- Douglas T. Anmuth
- Heather Bellini
- Mark Mahaney
- Peter C. Stabler
- Brian Nowak
- Ross Sandler
- Daniel Salmon
- Justin Post
- Mark A. May
- Stephen Ju
- Colin Alan Sebastian
- John Blackledge

## MANAGEMENT DISCUSSION SECTION

### Ellen West

#### *GAAP and Non-GAAP Financial Measures*

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

### Ruth Porat

#### *Financial Highlights*

##### *Revenues*

- Our revenues of \$26B in Q2 demonstrate the ongoing momentum in our businesses with broad-based strength globally
- Revenues were up 21% year on year and up 23% in constant currency
- Advertising revenues benefited from the strong performance in Sites, which was led in particular by tremendous results in mobile search, with a strong contribution from YouTube

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- Healthy growth in network revenues was driven by our programmatic business
- We also had substantial growth in other revenues from Cloud, Play and hardware

### ***Operating Summary***

- Our outline for today's call is first, I'll review the quarter on a consolidated basis for Alphabet, focusing on y-over-y changes
- I will review our results on a GAAP basis, which include the impact of stock-based compensation
- The European Commission fine of \$2.7B is reflected in our GAAP results, with the fine displayed as a separate line item for clarity
- In order to assist with comparing this quarter's results to prior periods, we're also providing operating income, net income and EPS results that exclude the impact of the fine
  - The fine is not reflected in our segment results
- Second, I will review results for Google, and then, Other Bets
- Finally, I will conclude with our outlook
- Sundar will then discuss our business and product highlights for the quarter after which we will take questions

### ***Financial Performance***

- I will start with a summary of Alphabet's consolidated financial performance for the quarter
- Total revenues were \$26B, up 21% y-over-y
- We realized a negative currency impact on our revenues y-over-y of \$364mm or \$361mm after the benefits of our hedging program
- Holding currency constant to the prior period, our total revenues grew 23% y-over-y

### ***Alphabet Revenues by Geography***

- Turning to Alphabet revenues by geography
- You can see that our performance was strong in all regions

#### ***U.S., EMEA, APAC and Other Americas***

- U.S. revenues were up 23% y-over-y to \$12.3B
- EMEA revenues were \$8.5B, up 14% y-over-y, reflecting weakness in the British pound and the euro
- Revenues were up 21% in fixed FX terms
- APAC revenues were \$3.7B, up 28% vs. last year and up 27% in fixed FX terms
- Other Americas revenues, which include results from Canada and Latin America, were \$1.4B, up 31% vs. last year in both reported and fixed FX terms

### ***Cost of Revenues***

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- On a consolidated basis, total cost of revenues including TAC, which I'll discuss in the Google segment results, were \$10.4B, up 28% year on year
- Other cost of revenues on a consolidated basis was \$5.3B, up 27% y-over-y, primarily driven by Google related expenses, specifically, costs associated with operating our data centers including depreciation, content acquisition costs primarily for YouTube and hardware related costs

### ***Operating Expenses***

- Operating expenses including the impact of the EC fine were \$11.5B
- Excluding the impact of the EC fine, operating expenses were \$8.8B in the quarter, up 18% y-over-y
- Year-on-year expense growth reflects the change in the timing of our annual equity refresh cycle from Q3 to Q1 each year
- As discussed previously, this affects the quarterly pace of stock-based compensation in 2017, but not the overall size of the expense for the year
- In order to transition to the new timing, we made a one-time half year grant in Q1 of this year, which is reflected in elevated year-on-year expense growth in Q2
- As a result, stock-based compensation totaled \$2B, up 33% y-over-y

### ***Headcount***

- Headcount at the end of the quarter was 75,606, up 1,614 people from last quarter
- Consistent with prior quarters, the vast majority of new hires were engineers and product managers
- In terms of product areas, the most sizeable headcount additions were once again made in Cloud, for both technical and sales roles, consistent with the priority we place on this business

### ***Operating Income, OI&E, Tax Rate, Net Income and EPS***

- Operating income was \$4.1B
- Excluding the impact of the EC fine, operating income was \$6.9B, up 15% vs. last year, and the operating margin was 26%
- Other income and expense was \$245mm
- We provide more detail on the line items within OI&E in our earnings press release
- Our effective tax rate was 19.5% for Q2
- Net income was \$3.5B, and earnings per diluted share were \$5.01
- Excluding the impact of the EC fine, net income was \$6.3B, and earnings per diluted share were \$8.90

### ***CapEx and Operating Cash Flow***

- Turning now to CapEx and operating cash flow, cash CapEx for the quarter was \$2.8B
- Operating cash flow was \$7.4B, with FCF of \$4.6B

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- We ended the quarter with cash and marketable securities of \$94.7B, of which approximately \$57.9B, or 61%, is held overseas

### ***Google Segment***

- Let me now turn to our segment financial results, starting with the Google segment
- Revenues were \$25.8B, up 21% y-over-y

### ***Google Sites Revenues***

- In terms of the revenue detail, Google Sites revenues were \$18.4B in the quarter, up 20% y-over-y
- The biggest contributors to growth again this quarter were mobile search and YouTube
- Network revenues were \$4.2B, up 13% year on year, reflecting the ongoing strength of programmatic and AdMob

### ***Other Revenues***

- Other revenues for Google were \$3.1B, up 42% y-over-y
- We have been talking about our bigger investment areas within Google, and you can see the momentum here, reflecting contributions from our newer revenue streams again this quarter on top of the ongoing strength in Play
- Specifically, Cloud continues to benefit from the ongoing investments in our go-to-market and product efforts
- Hardware continues to grow at a healthy pace year on year, with the extension of our product line geographically, particularly Google Home and Wifi
- The dollar impact to growth was more muted than in prior quarters, reflecting seasonality
- Finally, we continue to provide monetization metrics to give you a sense of the price and volume dynamics of our advertising businesses
- You can find the details in our earnings press release

### ***Traffic Acquisition Costs***

- Total traffic acquisition costs [TAC] were \$5.1B, or 22% of total advertising revenues and up 28% y-over-y
- The increase in both Sites TAC as a percentage of Sites revenue as well as network TAC as a percentage of network revenues continues to reflect the fact that our strongest growth areas, namely mobile search and programmatic, carry higher TAC.
- Total TAC as a percentage of total advertising revenues was up y-over-y as a result of an increase in the Sites TAC rate driven by the shift to mobile, which was, again, partially offset by a favorable revenue mix shift from network to Sites, which carries lower TAC
- Google's stock-based compensation [SBC] totaled \$1.9B for the quarter, up 40% y-over-y

### ***Operating Income, Margin and Accrued CapEx***

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- Operating income including the impact of SBC was \$7.8B, up 12% vs. last year, and the operating margin was 30%
- Accrued CapEx for the quarter was \$2.8B, reflecting investments in production equipment, facilities, and data center construction

### ***Headcount Additions and Marketing Costs***

- A couple of Google reminders for Q3, headcount additions tend to be seasonally high in Q3 because that is when we bring on new graduates
- In addition, please keep in mind that our marketing costs are typically weighted more heavily toward the back half of the year due to the holiday season, particularly as we promote our Made by Google line of hardware products

### ***Other Bets Revenues***

- Let me now turn and talk about Other Bets
- For Q2, Other Bets revenues were \$248mm, primarily generated by Nest, Fiber, and Verily
- Operating loss including the impact of SBC was \$772mm for Q2
- Other Bets accrued CapEx was \$151mm, primarily reflecting a reduced investment in Fiber, due to the pause in expansion we announced in Q3 2016
- We're pleased with our progress across Other Bets

### ***Nest and Life Sciences***

- A couple of updates, Nest continues to drive ongoing product expansion such as our recent introduction of the indoor security camera, Nest Cam IQ, as well as geographic expansion, both of which support its position as the leading brand in the connected home
- In life sciences, in addition to our progress at Verily, Calico has focused its efforts on the basic mechanisms of aging and three aging related diseases representing the leading causes of death
- Calico has established more than 20 active collaborations with other life sciences companies and academic institutions

### ***Partnerships***

- With Loon, we recently demonstrated the technology in Peru by successfully delivering basic Internet connectivity to tens of thousands of people affected by the tragic floods there
- We worked in partnership with the Peruvian government and Telefónica
- And our progress with Waymo continues nicely, as is reflected in the rider program in Phoenix and our recently announced partnerships with Lyft and Avis

### ***Opportunities***

- Let me wrap up

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- Almost two years after the creation of Alphabet, we see the benefits of our focus within Google and Other Bets and are pleased with the opportunities we have for sustained revenue and earnings growth
- We are obviously very happy with the ongoing strength in ads revenue, particularly in Search
- Our compelling secular trends continue to drive user adoption and engagement with mobile devices
- Our engineering and machine learning acumen enables us to build better experiences for users and advertisers
- We continue to see increasing contributions from our growing non-ads revenue businesses
- Play continues to be a strong contributor
- In addition, we've been making big bets within Google focused on Cloud, hardware and subscription businesses in YouTube, in order to better serve customers while also building additional and differentiated revenue streams
  - These businesses are consistent with and complementary to our core capabilities and leverage our infrastructure, distribution and engineering
- We believe we have a compelling runway here
- Longer term, we see great opportunity in the businesses we are building in Other Bets
  - These businesses reflect the incredible engineering talent across Alphabet, most notably in machine learning

### ***Investments***

- Our revenue growth and Alphabet's structure give us both the opportunity and confidence to invest in our businesses for the long-term
- We are doing that while being very deliberate about the focus, scale and pace of investments and remain committed to being conscientious in our use of all resources
- We're increasing investment in areas where we see the most potential, scaling back in others and sharpening our organizational effectiveness to make the most of the resources available

## **Sundar Pichai**

### ***Business Highlights***

#### ***Opening Remarks***

- We had a phenomenal quarter
- Google continues to lead the shift to AI driven computing
- We're working to make this incredible technology available to everyone around the world
- It's our focus on infusing our products and platforms with the power of machine learning and AI that's driving our success
- Today, I'll spend time talking about the areas where we are confidently investing for the future
  - First, the incredible momentum we are seeing in some of our core products powered by machine learning
  - Next, an update on three of our most promising bets, YouTube, Cloud and our hardware businesses
  - And I'll conclude with a strong performance of our computing and advertising platforms



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### ***Core Products***

- To start, our core products and the AI powering them
- Google has always been about using deep computer science and insights to solve some of the world's most complex problems
- People are no longer only using a keyboard, mouse and multi-touch, but are also using emerging inputs like voice and camera to ask questions and get things done in the real world
  - We are seeing this in the way people interact with the Google Assistant which is already now available on more than 100mm devices since launching last year and there's more to come since we released an Assistant SDK that will enable a wide range of new hardware devices which will include the Google Assistant
- We now have more than 70 home automation partners on the Assistant on Google Home and phones, including Honeywell, Logitech and LG, so you can do everyday things around the house using your voice

### ***Google Lens***

- At Google I/O, we announced Google Lens available later this year
- Lens is a set of vision-based computing capabilities that can understand what you're looking at and help you take action based on that information
- So for example, if you saw a poster for your favorite band, you would be able to take a picture and get relevant information and buy tickets to their next concert
- In Search, a great feature we launched this quarter in the U.S. is job search, to make looking for a job easier for everyone, no matter what line of work you're in
  - Many of these products that make people's lives easier are being powered by machine learning

### ***Machine Learning Algorithms***

- One focus area for us this quarter has been enabling our machine learning algorithms to learn and improve our products much faster
- One such research initiative, AutoML, enables us to pursue approaches to automate the design of machine learning models
- Our ability to rapidly deploy the best machine learning in all of our products enabled us, this quarter, to launch all sorts of new smart features to help moderate comments, suggest smart replies in Gmail and improved translations
- We rolled out new machine learning features in Google Maps, YouTube, Gmail and Google Photos, which now has more than 500mm monthly users who backup 1.2B photos and videos every day

### ***AlphaGo***

- I was also pleased that DeepMind's AlphaGo team was in Beijing for the Future of Go Summit where AlphaGo played against the number one world player Ke Jie
- Since playing AlphaGo, Ke Jie has been on a 20-game winning streak

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- He has said playing AlphaGo has fundamentally changed his understanding of the game
- It's remarkable to see AI have such a profound effect on one of the world's oldest more strategic games
- It can have the same impact in so many fields from medicine to science to energy usage and more

### ***YouTube***

- Now, let's move to some of our biggest bets, first, YouTube
- YouTube now has 1.5B monthly viewers and people watch on average 60 minutes a day on their phones and tablets
  - That's incredible and it helps thousands of passionate video creators make money
- The fastest growing screen for YouTube is in the living room
- YouTube watch time on TV screens has nearly doubled year on year
- This quarter, we unveiled six new ad supported YouTube Originals from celebrities including Ellen DeGeneres and Kevin Hart and YouTube creators like Rhett & Link
  - Advertiser feedback on these new shows has been extremely positive
- Last week, a live TV service, YouTube TV, added 10 new metro areas across America, tripling the markets where it's available in just four months

### ***Google Cloud***

- And to our next big bet with great momentum, Google Cloud
- Google Cloud Platform, GCP, continues to experience impressive growth across products, sectors and geographies, and increasingly, with large enterprise customers in regulated sectors
- To be more specific about our momentum with big customers, in Q2, the number of new deals we closed worth more than \$0.5mm is three times what it was last year
- Responding to the growth in existing and new customers around the world, we continue to invest in data centers to provide them the fastest most reliable service
- We opened new Google Cloud regions in Northern Virginia, Singapore, Sydney and London

### ***Partnerships***

- We also continue to build out our partnerships
- In Q2, we announced an expansion of our partnership at SAP and a new partnership with Nutanix, to integrate their products with GCP so customers can run workloads in hybrid environments, on prem and in the cloud, using containers and Kubernetes

### ***Hardware Business***

- Now, let's talk about our hardware business
- Sales of our new family of hardware continue to be encouraging and we are making good progress bringing these devices to more people



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- Google Home is now available in four countries the U.S., Canada, Australia and the UK, and we've announced it's coming to France and Germany in early August
- The Pixel phone continues to be really popular and Google Wifi just launched in Canada, Germany and France, to glowing reviews
  - Every day, I hear of people who love this product and how it has made Wi-Fi work much better in their homes

### ***Computing and Advertising Platforms***

- Shifting gears, our computing and advertising platforms are driving great results for our partners
- There are now more than 2B monthly active Android devices around the world
- It's really humbling so many people choose Android
- We're seeing a number of hardware makers launching devices to positive reviews, including the Samsung Galaxy S8 and the LG G6
- At Google I/O this quarter, we gave developers early access to Android O, which will focus on vitals like battery life and performance
- And Google Play continues to be a vital distribution platform for developers
- An incredible 82B apps were downloaded from Google Play in the last year alone, that's 11 apps for every person on earth
- We continue to work on the next generation of computing platforms, virtual and augmented reality
- By the end of this year, there'll be 11 Daydream-ready devices on the market from manufacturers like Samsung, LG, Motorola and ASUS

### ***Advertising Platforms***

- Turning to our advertising platforms
- Here too, machine learning is critical to helping advertisers and app developers analyze data in real-time to reach consumers with more useful ads and measure campaign effectiveness

### ***Google Marketing Next***

- At Google Marketing Next, this quarter, we launched Google Attribution, a comprehensive measurement tool that allows marketers to measure the impact of their campaigns across devices and channels all in one place with no additional cost
- We also launched new ad formats and bidding features in universal ad campaigns to help developers grow their user base across Google Play, Search, YouTube, Gmail and the Display Network
- At Google I/O, in 2016, we announced we had driven 2B app installs
  - Today, that number is more than 5B, that's amazing growth
- With 90% of transactions still happening off-line, we want to help consumers find what they're looking for in brick-and-mortar stores

### ***Store Visits Technology***

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- Our store visits technology is instrumental in understanding customer behavior that starts online and ends in-store
- Today, our store visits measurement is the largest program of its kind and we've now measured over 5B store visits in 17 countries
- This quarter, we also brought local ads and store visits measurement to video

### ***Video***

- Speaking of video, we are seeing continued success with bumper ads, our six-second ad format
- Both brands and viewers love the format, as it's the ideal length to capture attention
- L'Oréal, Hasbro, Xbox, Clinique and Neutrogena have all seen great success with bumpers
- And Google Preferred continues to grow
- We now have hundreds of brands buying Google Preferred in the U.S., nearly triple the number since it launched three years ago

### ***Small Businesses***

- We're not just helping large brands, we're also helping millions of small businesses get online and grow
- Every month, Google helps drive 100B visits to business websites and creates more than 3B direct connections between businesses and their customers
  - These interactions drive huge economic opportunities and growth for small businesses
  - Last month, to increase these opportunities, we launched an easy way for millions of small businesses to create a free simple mobile optimized website
- Small businesses can do it on a mobile phone in under 10 minutes, using the listing information already available on Google Search and Maps

### ***Revenues***

- And finally, helping publishers grow their revenues remains a huge focus for us
- We're using the power of automation and machine learning to improve our auction algorithms for publishers
- The 50 improvements we've made since 2016 are generating 15% more revenue for publishers using DoubleClick AdExchange
- Those are the highlights from Q2

### ***Closing Remarks***

This week will be another highlight for me

I'm going to Africa for a Google for Nigeria event to announce new products for Nigeria and Sub-Saharan Africa

I'm looking forward to seeing firsthand how technology and Google's products can make a real difference in people's lives

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I want to express a very sincere thank you to every Googler who worked tirelessly this quarter to bring all of our technology and products to the world

## QUESTION AND ANSWER SECTION

**<Q - Eric J. Sheridan>**: Maybe a big picture question directed to Sundar. As you think about the Google Assistant and what it can do medium to long-term, maybe talk a little bit about how the Assistant as a product could narrow the gap between consumption and utility inside your products vs. monetization over time with a specific focus? I'd love to hear about Local, in particular. Thanks so much.

**<A - Sundar Pichai>**: It's a good question. When I think about, we have – we're very focused over the long-term to making sure that Assistant can actually help people get things done in the real world, and so, obviously, when you think about it from that standpoint, Local becomes important. Over time, just like when the transition happened from desktop to mobile, people's bar for what they expect increase. They wanted more answers, they wanted more immediate gratification, right, and that's a continuum, and I think you'll see the trends.

And so, over time, we are laser focused on making sure we can deliver against those experiences. And I think Local and their particular strength over time, both in terms of the expertise we've built in Local, as well as our investment in Maps, is hopefully paying off.

**<Q - Douglas T. Anmuth>**: First one for Ruth. I was just hoping you could help us understand at least qualitatively how core margins for the advertising business are trending within the Google segment.

And then, Sundar, just on the Cloud business, I know you talked about four new regions being built out. Can you just talk about your strategy in building out that cloud infrastructure, how we should think about it in terms of building out extra capacity or whether it's more in line with near-term demand? Thanks.

**<A - Ruth Porat>**: Thanks. So starting with your margin question, look, as we've often said, we're focused on revenue and operating income dollar growth and not on operating margins. We have strong positions in healthy growing areas and are adding really exciting additional growth areas, and that's what we mean when we discuss driving long-term revenue and earnings growth.

To get a little more specific, the gross margin, this quarter, obviously reflects our product mix shift, and although the cost of sales is higher as a percentage of revenues, these costs are associated with high growth product areas that enable us to create value for all of our stakeholders.

And then, on the OpEx side, Q2 reflects a number of factors. First, I think really to your question on over time point, I mean you can see the impact of the timing shift in the equity refresh which we discussed previously. Now, as a reminder, that does abate in the back half of the year, but you can see it here in Q2.

And then, what you're also seeing in OpEx growth is the investments in areas that we've spilled out. So for example, in R&D, you can see the impact of the headcount increases in our priority areas, particularly cloud and machine learning, and marketing spend similarly reflects the strategic priority areas we've delineated, particularly hardware and YouTube subscription.

But as I said in my opening comments, we're increasing investment in areas where we see the most potential, we're scaling it back in others, we're focused on organizational effectiveness to make the most of all of our resources and all of that really underpins the goal to sustain both revenue and earnings growth over the longer term.

**<Q - Heather Bellini>**: I was just wondering, Sundar. You mentioned some of the strength you're seeing in GCP, and I was just wondering if you could share with us. When you do win, is there any commonality around the type of workloads that people are choosing you for? And can you share with us any updates on the go-to-market and how you feel about where you've come over the last year? But even more importantly, what do you need to do to get it where you need it to be over the next 12 months? Thank you.

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**<A - Sundar Pichai>**: Right, thanks, Heather. I'll also take Doug's question on the infrastructure too and do it together since they're related to cloud. Overall, when we think about our infrastructure, obviously we are serving cloud as well as our internal products, which are seeing tremendous growth as well. In terms of serving cloud customers, we are world-class and available and being reliable, and those are things we want to stay best-in-class. So we're clearly planning for that and planning ahead for infrastructure, and we have been consistently doing that.

And, Heather, in terms of your question about workloads and stuff, we are actually seeing quite a diverse set of use cases across sectors and industries and geographies. And so I would say the breadth of what we have seen has really surprised me.

In terms of go-to-market, I shared an update on it last quarter. I'm not sure there's much more interesting to add. We are continuing to do it while we are scaling up, and all the teams and the structure Diane has put in place is beginning to work well, and we are continuing to hire and scale all of this up as quickly as we can.

**<Q - Mark Mahaney>**: Let me try two questions, please. First, one on TAC. Ruth, the factors that have been causing TAC to rise seem relatively structural, the outsized growth of mobile and the rise of programmatic, so there's no particular reason to think that we should see anything other than gradual increase in TAC as a percentage of both O&O and network revenue going forward. So are there any reasons why that wouldn't be the case in the next year or two?

And then, Sundar, I thought one more interesting innovation that came out of Google I/O was visual search. And could you just talk about maybe a little bit the roadmap for that or the extent to which – how long it will take us to actually see that broadly in the market and what you think the appetite or how do you think that will change the way people search for products in the future, the ability to also search visually through your phone? Thank you.

**<A - Ruth Porat>**: So on the first question, there are obviously a number of factors that affect Sites TAC. We've talked about them over time. The primary driver again this quarter, as you noted in your question, was the strong growth in mobile and the fact that more mobile searches are subject to TAC. But the increase in Sites TAC y-over-y, I think what I would stress is it really provides another lens on just how strong our mobile business is.

There are other factors that affect the TAC rate, including the mix of paid vs. organic traffic as well as changes in partner mix and agreement terms. But I think the main point of your question here is we do continue to expect Sites TAC to increase, but our focus remains on growing profit dollars. And I'd go back to my comment, we're just really pleased with the strength of our mobile business, which is benefiting profit dollars even as the TAC percentage increases.

And programmatic, a very similar answer, which is we're pleased to have a strong position in a growing area.

**<A - Sundar Pichai>**: And on questions around visual search, when we think about Google Lens, we think about it as a set of capabilities which we'll roll out across many different products, but we'll mainly start getting in the hands of our users in Q4.

I think early days, we want to make sure it works well for use cases where it can and bet on the long-term trends in computer vision as we make progress there. I also think there are cases where pulling out a phone and looking at it is a bit cumbersome. And so over time, as form factors emerge where it's more natural for you to look at and input that into computing, it will get used more.

Overall, for humans, the way they see, visual input is a very high bandwidth way of communicating, and so it's important that we bring that in computing. So long run, I'm very bullish on it, but we're going to roll this out slowly and thoughtfully.

**<Q - Peter C. Stabler>**: One for Sundar, at Marketing Next, your team unveiled new ways that Google is leveraging consumer intent signals across your 1 billion-user-plus platforms. And it seems that some of the walls between product data silos are being lowered a bit, and one of the obvious gains that Sridhar [Ramaswamy] highlighted was search personalization. I'm wondering if you could speak broadly to the opportunity of looking at data from a targeting perspective more holistically across platforms. Thanks so much.

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**<A - Sundar Pichai>**: Look, I think it's important we've always felt, as marketers, when they spend and try to reach users, the more we can give them visibility about how their spend is working and they can attribute across all the stages of the funnel, I think that will really help make everything work well.

So we've always taken that long-term view. And everything we do, be it store visits, which we did a while ago or more recently, at Google Marketing Next, we talked about Google Attribution as well. So all that starts adding up and I think pushes in this right long-term direction. And there's more work to be done, but I think as users use everything across multiple products and devices in a thoughtful way, I think making all of this work well, we see it as an opportunity ahead of us.

**<Q - Brian Nowak>**: I have two. The first one, you've talked about micro-moments throughout the course of the year and micro-moments on mobile. I was wondering if you could give us a couple examples of micro-moments or search verticals where you've really seen an increase in your monetization over the last year. And Sundar, as you look out across all the search verticals, what are the two biggest one or two use cases you still see to improve the overall relevancy of search results and potential monetization?

**<A - Sundar Pichai>**: On the first one, I'd probably rather than be very specific, any time people are looking to buy, find, go, do things, you could be looking for a local pizza, you could be buying, we see queries like jeans near me and people are looking for jeans next to them. So these are all very, very specific things, and in all of these cases, we have found we've been able to impact the experience for both users and advertisers. So I think that applies generally broadly.

In terms of all the verticals, I think there are a lot of opportunities. Local has been an area of strength for us. We've seen a lot of traction and we continue to think as a vertical. Given the assets we've built up over the years, we can continue to invest more and do better for our users.

**<Q - Ross Sandler>**: I had two questions for Sundar. First, as you mentioned, the 15% yield improvement on publisher yield through DoubleClick from machine learning. Is there a comparable stat inside of Google on an operated Search or YouTube, after implementing machine learning's yield improvement of X. I'd be curious to hear that.

And then, the second question is, as we look out into the future and you guys mentioned 2B Android actives at I/O and you've mentioned 11 apps per user in your prepared remarks. If Google is forced to unbundle their own apps from Android in the future, what's the strategy to ensure that Maps and YouTube and Search get distribution, and Android doesn't kind of go the way of China and other markets. I'd be curious to hear that. Thank you.

**<A - Sundar Pichai>**: Let me take the first one first. On machine learning, definitely, machine learning, we've been using it on Search. RankBrain has become one of the important signals in addition to the many other signals in Search. And so it, definitely, has had an impact. Same on YouTube across the board. I don't have any specific metrics to give, but we definitely are seeing impact and we think we are in early days of the impact we can see.

In terms of Android, we are obviously thoughtfully building Android out and scaling it out, and we offer our apps as part of it. OEMs get to distribute other apps as well. We think it's a very open market, open ecosystem, works well for everyone involved, and I expect that to continue. And a lot of our products which are successful on Android happen to be successful outside of Android as well including on the web. These are products generally used by billions of users. And by now, we've worked hard to earn that trust and scale. And so, I'm confident we can continue scaling this up.

**<Q - Daniel Salmon>**: I think the last update we heard publicly on Promoted Places on Maps was in December, when you announced that you'd be beginning some limited tests. I don't think there's been any public comment from the company since then. Quite frankly, we haven't heard a whole lot anecdotally about it either. So I was just hoping for a quick update on that product. Thank you.

**<A - Sundar Pichai>**: Overall, I mean it's an area where we are still, like, really focused on improving the consumer experience. I think we are evolving Maps to be a lot more beyond just driving directions and users are responding to it. And I think we are in the process of making all that work better.

And also, we're also focused in terms of what we see as local opportunity within Search as well. But we'll continue testing and evolving. I think we want to make sure we get the consumer experience right before we invest more on



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promoted opportunities on Maps.

**<Q - Justin Post>**: A few for Ruth. First, I'm wondering if you could comment at all on the Cloud business profitability, medium or long-term, how you're thinking about that. Second, I'll go ahead and take a shot at the EC's decision lately. It clearly is material for financials. How are you thinking about approaching that decision? And does that impact any of your other advertising businesses as far as innovation? And then, finally, any thoughts on verticals that were strong this quarter that supported the organic revenue growth? Thank you.

**<A - Ruth Porat>**: So as you know, we don't break out by product. I'll just add a bit more color on Cloud. We're clearly excited about the opportunity we have here and it does continue to drive sizeable revenue growth, as I said in my opening comments, as did Sundar. And we are seeing momentum in the business. I think the comment that Sundar made about the number of new deals over 500,000 increasing three times year on year gives you an indication of the momentum in the business. It's obviously not a financial forecast, but it does display the traction we're having with Cloud in the market and GCP remains one of the fastest growing businesses across Alphabet. G Suite continues to have strong growth. So we're really pleased with what that means for both the longer-term trends and the profitability.

We do believe that from the many years of investment we've already made in things like technical infrastructure and security, which operate with tremendous efficiency, that provides us with a benefit. But near-term, we're investing meaningfully in sales and engineering, service, support, continuing to expand out regions to make sure that we're delivering the best experience for our enterprise customers. And that's what we're really focused on.

In terms of, I think, your second question was the EC. There's really not much of an update there. We're still early in our analysis of the decision and the right next steps, and we do have time to notify the Commission of proposed remedies as well as to implement changes. The main thing is we're very focused on helping users and advertisers and are reviewing our options. It's an ongoing legal matter, so there's not much more to comment on that one.

And then, the third question was?

**<Q - Justin Post>**: On verticals that were strong?

**<A - Ruth Porat>**: Yeah, in terms of – I think that what you're trying to get out here on what are we seeing in particular with Sites revenue and there's not any one thing to call out whether it's by vertical or steps that we're taking, and that's really what I would point you to more. I think it's an important point that we're very excited about the opportunities here given both the underlying secular trends broadly with mobile, Sundar has talked a lot about that, but also all that we are able to layer on top of it just given the engineering acumen here.

And we talked about this on prior calls. It's true again here this quarter that no one change has been driving the results. And so, what you're seeing is the combined benefit of a number of changes we've made. It's really this maniacal focus on all elements of the user and advertiser experience and nothing to call out by vertical.

**<Q - Mark A. May>**: I think the first one is for Sundar. Data, of course, is a key differentiator in digital advertising. I was hoping maybe you could talk about how you've changed your use of Google Search data recently in areas outside of Search and how that is or might impact the effectiveness of advertising on channels like YouTube and others outside of Search?

And then, Ruth, in your prepared remarks, you mentioned tremendous growth in mobile search in the quarter. I think that's a more emphatic statement than in the recent quarters. Hoping that maybe you could provide more color on some of the areas where you're seeing the change in growth trajectory coming from within mobile search. Thanks.

**<A - Sundar Pichai>**: On your first question, obviously, we do these things, but the foremost thing being making sure we do the right things for user privacy. But within our own products, we are trying to help users get a better experience across on the consumer side and the advertising side and I think there is opportunity there. And so, we'll be thoughtful as we move forward.

**<A - Ruth Porat>**: And then, on mobile search, I think what you're hearing is we're really pleased with the ongoing efforts there and as I just said, there was no one change that really drove this. What's extraordinary about the team is



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with the focus on users and advertisers, what is it that is most useful, Sundar spoke about some of them with Local, but it's really again it's a lot of small incremental efforts that, in the aggregate, continue to enable us to benefit from what's a really nice underlying secular trend here, and that's what we're seeing in the results again.

**<Q - Mark A. May>**: There's nothing around – are you listening to this? There's nothing around like geography or platforms or?

**<A - Ruth Porat>**: I'm not sure if that was directed to me or – but in terms of geography, I think hopefully, one of the benefits, so the way we recast the data here last quarter was so you can actually get a bit more insight into what's going on around the globe, and that's why I made the comment that we're having really broad strength globally, you can see it in each one of the regions here. U.S. continues to deliver strong growth engagement across products.

If you look at EMEA, on a fixed FX basis, up 21%. You can see the same in APAC, the same in other Americas. So yes, there is broad-based strength across geographies. And I think I'm not calling out one particular area, because what you're seeing here is the secular trend. I've used that term a couple of times now, and we're continuing to benefit from that around the globe, and we're continuing to benefit from on top of that the efforts of our team.

**<Q - Stephen Ju>**: So, Sundar, I'm just wondering if you can give us some sense of advertiser adoption, particularly among your retail clients, the store visit products, as it seems like there's still a large opportunity to drive offline purchasing.

And, Ruth, can you give us some sense of any headwinds you might be seeing in your streams of revenue away from Play or GCP in the O&O revenue line, as we're just not that accustomed to seeing a sequentially flat revenue line there? Thanks.

**<A - Sundar Pichai>**: Look, I think I spoke about it in my opening remarks, but since store visits measurement was announced three years ago, advertisers have measured over 5B store visits globally. And I think we have just barely scratched the surface.

At our Marketing Next in May, we announced that the store visits measurement will also roll out for YouTube TrueView campaigns, and we'll be rolling out store sales measurement in the coming months. So advertisers can actually measure in-store revenue in addition to store visits delivered by Search and shopping ads.

So we've had good proof points advertisers who have used it. For example, Virgin Holidays used it, factored in-store sales measurements, and they realized their search campaigns generate double the profit compared to looking at online KPIs alone. So I think there's a lot of opportunity there. And so we'll do more there over time.

**<A - Ruth Porat>**: And then you asked on the other revenue line, it was up nicely again this quarter, up 42% year on year, and that obviously includes the impact of FX. It's obviously a mix of businesses, including some of our bigger investment areas, most notably cloud and hardware. And as I said at the outset, Play continues to perform really well.

I think if you're asking about the quarter on quarter sequentially, you noted we're talking about a mix of businesses that have different characteristics. And to state the obvious, Play is more hit-driven. It's highly seasonal. Hardware is also seasonal. So the year-on-year provides a better sense of the dynamics of the business and that's what you can see in this lineup year on year really nicely this quarter.

**<Q - Colin Alan Sebastian>**: Maybe just one question for Sundar. I wonder if you could update us on your thoughts regarding the conversions of Chrome and Android operating systems. And in particular, I'm curious whether the emergence of Google Assistant and Voice as a corollary and across devices is a reason to move forward with more integration between the two platforms. Thanks.

**<A - Sundar Pichai>**: Look, we've been thoughtfully doing it, putting users first, and I'm excited at how Android apps are coming to Chromebooks. And we see that as a great opportunity, and I think that will help us deliver a very compelling experience. And we just have started doing it this year, and I expect it to really get momentum as we go through to next year. So that's an example of convergence, and I think that will work really well.

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And so in terms of products like Google Assistant and Voice, I think we will make sure, for users, it doesn't matter and that they work across every platform they use, including our platforms as well as other people's platforms. So we think about making sure our services reach as many users as possible, and so we are working on that as well.

**<Q - John Blackledge>**: Two questions. So for Sundar or Ruth, within Cloud, could you talk about your view of G Suite's enterprise penetration right now, key drivers of adoption longer term, and if you view it as a potential differentiator for Google Cloud vs. other large competitors.

And then within YouTube, 60 minutes per day of viewing on phones and tablets is obviously, incredible at that scale. Any thoughts on what could drive further material viewing or engagement growth over time? Thank you.

**<A - Sundar Pichai>**: Maybe on YouTube, I would say YouTube is one of those products which is scaling really well globally, just like Search did, and we are seeing real strong growth on mobile and we are seeing real strong growth for YouTube on emerging markets as well, and we are seeing real strong growth on television. So if I look at YouTube on mobile, on emerging markets, on larger screens, they all look like newer opportunities. And so I think there's a lot more growth ahead.

And on Cloud, I think we've answered it. Obviously, we see differentiated strengths in machine learning, data analytics, security, and reliability. And the combination of not just GCP, G Suite working together with GCP, we are seeing increasing win rates and adoption across enterprise customers. And I also think all the investments we are doing in terms of broadening our ecosystem, including the newer partnerships with the companies I mentioned earlier, that should begin to pay off, and overall, the return on investment from the hiring and region expansion we are doing. So I think we are set up incredibly well and I look forward to the momentum ahead

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