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Operator

Welcome, everyone. Thank you for standing by for the Alphabet Second Quarter 2024 Earnings Conference Call. At this time, all participants are in a listen-only mode. After the speaker presentation, there will be a question-and-answer session. [Operator Instructions] I would now like to hand the conference over to your speaker today, Jim Friedland, Director of Investor Relations. Please go ahead.

Jim Friedland

Thank you. Good afternoon everyone and welcome to Alphabet's Second Quarter 2024 Earnings Conference Call. With us today are Sundar Pichai, Philipp Schindler, and Ruth Porat. Now, I'll quickly cover the Safe Harbor. Some of the statements that we make today regarding our business, operations, and financial performance may be considered forward-looking. Such statements are based on current expectations and assumptions that are subject to a number of risks and uncertainties. Actual results could differ materially. Please refer to our Forms 10-K and 10-Q, including the risk factors. We undertake no obligation to update any forward-looking statement. 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. Our comments will be on year-over-year comparisons unless we state otherwise. And now I'll turn the call over to Sundar.

Sundar Pichai

Thank you, Jim. And hello, everyone. I'm really pleased with our results this quarter. They showed tremendous ongoing momentum in Search and great progress in Cloud with our AI initiatives driving new growth. Search had another excellent quarter. And in terms of product innovation, we are seeing great progress with AI overviews. In Q2, Cloud reached some major milestones. Quarterly revenues crossed the \$10 billion mark for the first time, at the same time pass the \$1 billion mark in quarterly operating profit. Year-to-date, our AI infrastructure and generative AI solutions for Cloud customers have already generated billions in revenues and are being used by more than 2 million developers. As I spoke about last quarter, we are uniquely well-positioned for the AI opportunity ahead. Our Research and Infrastructure leadership means, we can pursue an in-house strategy that enables our product teams to move quickly. Combined with our model building expertise, we are in a strong position to control our destiny, as the technology continues to evolve. Importantly, we are innovating at every layer of the AI stack, from chips to agents and beyond, a huge strength. We are committed to this leadership long-term. This was underscored by the announcements we made at I/O, Cloud Next, and Google Marketing Live, and we'll touch on many of them here. Today, I'll start with Search, then move to our AI momentum more generally, followed by Cloud, YouTube, and some closing thoughts. Let's dive in. Over the past 25 years, we have continued to reimagine and expand Google Search across many technological shifts. With AI, we are delivering better responses on more types of search queries and introducing new ways to search. We are pleased to see the positive trends from our testing continue as we roll out AI overviews, including increases in search usage, and increased user satisfaction with the results. People who are looking for help with complex topics are engaging more and keep coming back for AI overviews. And we see even higher engagement from younger users, aged 18 to 24, when they use search with AI overviews. As we have said, we are continuing to prioritize approaches that send traffic to sites across the web. And we are seeing that ads appearing either above or below AI overviews, continue to provide valuable options for people to take action and connect with businesses. Beyond AI overviews, AI expands the types of queries we are able to address and opens up powerful new ways to search. Visual search via Lens is one. Soon you'll be able to ask questions by taking a video with Lens. And already we have seen that AI overviews in Lens, leads to an increase in overall visual search usage. Another example is Circle to Search, which is available today on more than 100 million Android devices. We are seeing tremendous momentum from our AI investments. More than 1.5 million developers are now using Gemini across our developer tools. And we recently unveiled new models that are more capable and efficient than ever. Gemini now comes in 4 sizes, with each model designed for its own set of use cases. It's a versatile model family that runs efficiently on everything from data centers to devices. At 2 million tokens, we offer the longest context window of any large-scale foundation model to-date, which powers developer use cases that no other model can handle. Gemini is making Google's own products better. All six of our products with more than 2 billion monthly users now use Gemini. This means that Google is the company that's truly bringing AI to everyone. Gemini is powering incredibly helpful features in search, workspace, Google messages, and more. At I/O, we showed new features coming soon to Gmail and to Google Photos. Soon you'll be able to ask photos questions like, what did I eat at that restaurant in Paris last year? For a glimpse of the future, I hope you saw Project Astra at I/O. It shows multimodal understanding and natural conversational capabilities. We've always wanted to build a universal agent and it's an early look at how they can be helpful in daily life. Our AI product advances come from our long-standing foundation of research leadership, as well as our global network of infrastructure. In Q2, we announced our first data center and cloud region in Malaysia, and expansion projects in Iowa, Virginia, and Ohio. Our TPUs are a key bet here, too. Trillium is the sixth generation of our custom AI accelerator, and it's our best performing and most energy efficient TPU to-date. It achieves a near 5 times increase in peak compute performance per chip and a 67% more energy efficient compared to TPU v5e. And the latest Nvidia Blackwell platform, will be coming to Google Cloud in early 2025. We continue to invest in designing and building robust and efficient infrastructure to support our efforts in AI, given the many opportunities we see ahead. Of course, as we do this, we'll continue to create capacity by allocating resources towards our highest priorities. We are relentlessly driving efficiencies in our AI models. For example, over the past quarter, we have made quality improvements that include doubling the core model size for AI overviews, while at the same time improving latency and keeping cost per AI overviews served flat. And we are focused on matching the right model size to the complexity of the query in order to minimize impact on cost and latency. Separately on our real estate investments, we are taking a measured approach to match the current and future needs of our hybrid workforce, as well as our local communities. Next, Google Cloud. We continue to see strong customer interest, winning leading brands like Hitachi, Motorola Mobility, and KPMG. Our deep partnership with Oracle significantly expanded our joint offerings to the large customer base. Our momentum begins with our AI infrastructure, which provides AI startups like Essential AI, with leading cost performance for models and high-performance computing applications. We continue to drive fundamental differentiation with new advances since Cloud Next. This includes Trillium, which I mentioned earlier, and A3 Mega powered by Nvidia H100 GPUs, which doubles the networking bandwidth of A3. Our enterprise AI platform, Vertex, helps customers such as Deutsche Bank, Kingfisher, and the US Air Force build powerful AI agents. Last month, we announced a number of new advances. Uber and WPP are using Gemini Pro 1.5 and Gemini Flash 1.5 in areas like customer experience and marketing. We broaden support for third-party models, including Anthropic's Claude 3.5 Sonnet and open source models like Gemma 2, Llama and Mistral. We are the only cloud provider to offer grounding with Google Search, and we are expanding grounding capabilities with Moody's, MSCI, ZoomInfo, and more. Our AI-powered applications portfolio is helping us win new customers and drive upsell. For example, our conversational AI platform is helping customers like Best Buy and Gordon Food Service. Gemini for Workspace helps click therapeutics analyze patient feedback as they build targeted digital treatments. Our AI-powered agents are also helping customers develop better quality software, find insights from their data, and protect their organization against cybersecurity threats using Gemini. Software engineers at Wipro are using Gemini code assist to develop, test, and document

software faster. And data analysts at Mercado Libre are using BigQuery and Looker to optimize capacity planning and fulfill shipments faster. Cyber security risks continue to accelerate and the number of breaches continue to grow, something we all see in the news every day and that our [Mandiant teams] (ph) help manage. Our strong track record of uptime, quality control and reliability made Google Cloud the trusted security choice for organizations like Fiserv and Marriott International. In Q2, we infused AI throughout our security portfolio, helping TELUS strengthen its proactive security posture. Turning next to YouTube, YouTube is focused on a clear strategy, connecting creators with a massive audience and enabling them to build successful businesses through ads and subscriptions, while helping advertisers reach their desired audience. We had a great brand cast this quarter, and Philip will say more. I'm pleased at the progress here. YouTube has remained number one in US Streaming watch time, according to Nielsen. Views of YouTube shots on connected TVs more than double last year. And we are making it easier for creators to add captions and turn regular videos into shots. Next, on Android and Pixel. We joined Samsung for their Galaxy Unpacked event a few weeks ago, and we shared that Samsung's new devices will include the latest AI-powered Google updates on Android. It was a great event. I'm looking forward to our Made by Google event happening in August. We'll have lots to share around Android and the Pixel portfolio of devices. Our Pixel line is doing well. We recently introduced the new Pixel 8a, powered by our latest Google Tensor G3 chip. It provides beautiful AI experiences like Circle to Search, Best Take, and a Gemini-powered AI assistant. In other bets, I'm really pleased with the progress Waymo's making, a real leader in the space and getting rave reviews from users. Waymo's served more than 2 million trips to-date and driven more than 20 million fully autonomous miles on public roads. Waymo's now delivering well over 50, 000 weekly paid public rides, primarily in San Francisco and Phoenix. And in June, we removed the waitlist in San Francisco, so anyone can take a ride. Fully autonomous testing is underway in other Bay Area locations without a human in the driver's seat. Before I close, I want to acknowledge that today is Ruth's final earnings call. Let me take a moment to thank her for all she has done for Google and Alphabet as our longest-serving CFO. I'm excited to continue to work with her in her new role. And I look forward to welcoming our newly appointed CFO, Anat Ashkenazi. She starts next week, and you'll hear from her on our call next quarter. Thanks as always to our employees and partners everywhere for a great Q2. With that, over to you, Philip.

Philipp Schindler

Thanks, Sundar, and hello, everyone. Starting with performance, Google Services delivered revenues of \$73.9 billion for the quarter, up 12% year-on-year. Search and other revenues grew 14% year-on-year, led by growth in the retail vertical, followed by financial services. YouTube ads revenues were up 13% year-on-year driven by growth and brand as well as direct response. Network revenues declined 5% year-on-year. In subscriptions, platforms, and devices, year-on-year revenues increased 14%, driven again by strong growth in YouTube subscriptions. For the rest of my remarks, I want to double click on two topics. First, how we're applying AI across the marketing process to deliver an even stronger ads experience. Second, YouTube's position as the leading multi-format platform. So let me start by sharing some of the ways we are applying AI to bring more performance benefits to even more businesses. Q2 brought several major opportunities to meet and learn from users, developers, creators, and customers. From I/O to Brandcast, Google Marketing Live and Can, a growing number of our customers and partners are looking to understand how to successfully incorporate AI into their businesses. This quarter, we announced over 30 new ads features, and products to help advertisers leverage AI and keep pace with the evolving expectations of customers and users. Across Search, PMax, DemandGen, and Retail, we're applying AI to streamline workflows, enhance creative asset production, and provide more engaging experiences for consumers. Listening to our customers, retailers in particular have welcomed AI-powered features to help scale the depth and breadth of their assets. For example, as part of a new and easier-to-use merchant center, we've expanded Product Studio, with tools that bring the power of Google AI to every business owner. You can upload a product image from the AI with something like, feature this product with Paris skyline in the background and Product Studio will generate campaign ready assets. I also hear great feedback from our customers on many of our other new AI-powered features. We're beta testing, virtual try on and shopping ads and plan to roll it out widely later this year. Feedback shows this feature gets 60% more high-quality views than other images and a higher click-out to retailer sites. Retailers love it because it drives purchasing decisions and fewer returns. Our AI-driven profit optimization tools have been expanded to performance max and standard shopping campaigns. Advertisers use profit optimization and smart bidding see a 15% uplift in profit on average compared to revenue-only bidding. Lastly, DemandGen is rolling out to Display in Video 360 and Search Ads 360 in the coming months with new generative image tools that create stunning high-quality image assets for social marketers. As we said at GML, when paired with Search or PMax, DemandGen delivers an average of 14% more conversions. The use cases we're seeing across the industry show the incredible potential of these AI-enabled products to improve performance. Let me briefly share two examples with you. Luxury jewelry retailer Tiffany leveraged DemandGen during the holiday season and saw 2.5% brand lift in consideration and actions, such as adding items to cards and booking appointments. The campaign drove a 5.6 times more efficient cost per click compared to social media benchmarks. Our own Google marketing team used DemandGen to create nearly 4,500 ad variations for a Pixel 8 campaign shown across YouTube, Discover, and Gmail, delivering twice the click-through rate at nearly a quarter of the cost. In addition to strengthening our ads products for customers, we continue to evolve our existing systems and products with improved models delivering further performance gains. In just six months, AI-driven improvements to quality, relevance, and language understanding have improved Broad Match performance by 10% for advertisers using Smart Bidding. Also, advertisers who adopt PMax to Broad Match and Smart Bidding in their Search campaigns, see an average increase of over 25% more conversions or value at a similar cost. We'll continue to listen to our customers and use their feedback to drive innovation across our products. As you can hear, I continue to be excited about the AI era for ads. Now let's turn to YouTube. I've talked before about our approach to making YouTube the best place to create, watch and monetize. First, the best place to create. What sets YouTube apart from every other platform are the creators and the connection they have with their fans. Audiences tuning in to watch their favorite creators continue to grow. For example, two weeks ago, Mr. Beast's channel hit more than 300 million subscribers. Next, the best place to watch. Our long-term investment in CTV continues to deliver. Views on CTV have increased more than 130% in the last three years. According to Nielsen, YouTube is the Number #1 most watched streaming platform on TV screens in the US for the 17th consecutive month. Zooming out, when you look not just at streaming, but at all media companies and their combined TV viewership, YouTube is the second most watched after Disney. And this growth is happening in multiple verticals, including sports, which has seen CTV watch time on YouTube grow 30% year-over-year. Lastly, the best place to monetize. CTV on YouTube is continuing to benefit from a combination of strong watch time growth, viewer and advertiser innovation and a shift in brand advertising budgets from linear TV to YouTube. Our largest advertisers across verticals, including retail, entertainment, telco and home and personal care, are partnering with creators on ads and organic integrations. Verizon, for example, worked with a YouTube creator and Verizon customer to show them many ways that plans and offerings can be customized to fit people's lives. Using AI-powered formats, they created sketches in multiple lengths and orientations to serve the right creative to the right viewer and drive people to their site. Verizon's creator ads had a 15% lower CPA and a 38% higher conversion rate versus other ads. Turning to Shorts. Last quarter, I shared that in the US, the monetization rate of YouTube Shorts relative to in-stream viewing is showing a healthy rate of growth. Again, this quarter, we continue to see an improvement in Shorts monetization, particularly in the US. We are also seeing a very encouraging contribution from brand advertising on Shorts, which we launched on the product in Q4 last year. Lastly, a few words on shopping. Last year, viewers watched 30 billion hours of shopping-related videos, and we saw a 25% increase in watch time for videos that help people shop. While it is early days, shopping remains a key area of investment. At GML, we rolled out several product updates to YouTube shopping, helping creators sell products to their viewers. These updates included; product tagging where creators can tag products in their videos for viewers to discover and purchase, product collections and a new affiliate hub, a one-stop shop for creators to find deals and promotional offers from brands and track their affiliate earnings. With that, I'll finish by saying a huge thank you to Google's everywhere for their extraordinary commitment and to our customers and partners for their continued collaboration and trust. And Ruth, thanks for your amazing leadership and partnership over all these years. Now for one last time, it's over to you.

Ruth Porat

Thank you, Philipp, and thanks, Sundar, for those kind words. We had another strong quarter, driven in particular by performance in Search and Cloud, as well as the ongoing efforts to durably reengineer our cost base. My comments will be on year-over-year comparisons for the second quarter unless I state otherwise. I will start with results at the Alphabet level followed by segment results and conclude with our outlook. For the second quarter, our consolidated revenues were \$84.7 billion, up 14% or up 15% in constant currency. Search remained the largest contributor to revenue growth. In terms of expenses, total cost of revenues was \$35.5 billion, up 11%. Other cost of revenues was \$22.1 billion, up 14%, with the increase driven primarily by content acquisition costs, followed by depreciation as well as the impact of the Canadian digital services tax, which was applied retroactively. Operating expenses were \$21.8 billion up 5%, primarily reflecting an increase in R&D partially offset by a decline in G&A with sales and marketing essentially flat to the second quarter last year. The increase in R&D was driven primarily by compensation which was affected by lapping a reduction in valuation-based compensation liabilities in certain other bets in the second quarter last year followed by depreciation. The largest single factor in the year-on-year decline in G&A expenses was lower charges related to legal matters. Operating income was \$27.4 billion, up 26% and our operating margin was 32%. Net income was \$23.6 billion and EPS was \$1.89. We delivered free cash flow of \$13.5 billion in the second quarter and \$60.8 billion for the trailing 12 months. As a reminder, last year, we had a timing benefit in the second and third quarters from a \$10.5 billion deferred cash tax payment made in the fourth quarter, which depressed reported free cash flow growth this quarter, and we'll do so again next quarter. We ended the quarter with \$101 billion in cash and marketable securities. Turning to segment results. Within Google Services, revenues were \$73.9 billion, up 12%. Google Search and other advertising revenues of \$48.5 billion in the quarter were up 14%, led again by growth in retail, followed by the financial services vertical. YouTube advertising revenues of \$8.7 billion were up 13% driven by brand followed by direct response advertising. Network advertising revenues of \$7.4 billion were down 5%. Subscription platforms and devices revenues were \$9.3 billion up 14%, primarily reflecting growth in YouTube subscription revenues. TAC was \$13.4 billion, up 7%. Google Services operating income was \$29.7 billion up 27% and the operating margin was 40%. Turning to the Google Cloud segment. Revenues were \$10.3 billion for the quarter, up 29%, reflecting first significant growth in GCP, which was above growth for cloud overall and includes an increasing contribution from AI. And second, strong Google Workspace growth, primarily driven by increases in average revenue per seat. Google Cloud delivered operating income of \$1.2 billion and an operating margin of 11%. As to our Other Bets for the second quarter, revenues were \$365 million and the operating loss was \$1.1 billion. Turning to our outlook for the business. With respect to Google Services, First, within advertising. The strong performance of search was broad-based across verticals. In YouTube, we are pleased with the growth in the quarter. We had healthy watch time growth continued to close the monetization gap in Shorts and had continued momentum in Connected TV, with brand benefiting in part from an ongoing shift in budgets from linear television to digital. As we look forward to the third quarter, we will be lapping the increasing strength in advertising revenues in the second half of 2023, in part from APAC based retailers. Turning to subscriptions, platforms and devices. First, we continue to have significant growth in our subscriptions business which drives the majority of revenue growth in this line. However, there was a sequential decline in the year-on-year growth rate, as we anniversaried the impact of a price increase for YouTubeTV in the second quarter last year. The impact will persist through the balance of the year. Second, with regard to platforms. We are pleased with the performance in play driven by an increase in buyers. Finally, with respect to devices. The most important point as we look forward is that our Made by Google launches have been pulled forward into the third quarter from the fourth quarter last year benefiting revenues in Q3 this year. Turning to cloud, which continued to deliver very strong results. For the first time, Cloud crossed \$10 billion in quarterly revenues and \$1 billion in quarterly operating profit. As Sundar noted year-to-date, our AI infrastructure and generative AI solutions for cloud customers have already generated billions in revenues and are being used by more than 2 million developers. We're particularly encouraged that the majority of our top 100 customers are already using our generative AI solutions. We continue to invest aggressively in the business. Turning to margins. The margin expansion in Q2 versus last year reflects our ongoing efforts to durably reengineer our cost base, as well as revenue strength. Our leadership team remains focused on our efforts to moderate the pace of expense growth in order to create capacity for the increases in depreciation and expenses associated with the higher levels of investment in our technical infrastructure. Once again headcount declined quarter-on-quarter, which reflects both actions we have taken in the first half of the year and a much slower pace of hiring. Looking ahead, we expect a slight increase in headcount in the third quarter, as we bring on new graduates. As we have discussed previously, we're continuing to invest in top engineering and technical talent, particularly in cloud and technical infrastructure. Looking forward, we continue to expect to deliver full-year 2024 Alphabet operating margin expansion relative to 2023. However, in the third quarter operating margins will reflect the impact of both the increases in depreciation and expenses associated with the higher levels of investment in our technical infrastructure, as well as the increase in cost of revenues due to the pull-forward of hardware launches into Q3. With respect to CapEx, our reported CapEx in the second quarter was \$13 billion, once again driven overwhelmingly by investment in our technical infrastructure with the largest component for servers followed by data centers. Looking ahead, we continue to expect quarterly CapEx throughout the year to be roughly at or above the Q1 CapEx of \$12 billion keeping in mind that the timing of cash payments can cause variability in quarterly reported CapEx. With regard to other bets, we continue to focus on improving overall efficiencies, as we invest for long-term returns. Waymo is an important example of this, with its technical leadership coupled with progress on operational performance. As you will see in the 10-Q, we have chosen to commit to a new multi-year investment of \$5 billion. This new round of funding, which is consistent with recent annual investment levels will enable Waymo to continue to build the world's leading autonomous driving technology company. To close, this is my 56th and last earnings call, 37 of them at Alphabet. So I have a few closing thoughts of gratitude. I've been so proud to be at Google and Alphabet as CFO and to work with some of the smartest people in the world every day. I think, we have accomplished a lot in the last nine plus years, and I am confident that progress will continue. Of course, I'm not going far and I'm honored to have my new role, which I've been slowly working my way into during the past 11 months and I look forward to continuing to work with Sundar, and our great team. Being CFO of one of the most important companies in the world has been the opportunity and responsibility of a lifetime. Google's Mission of advancing technology and bringing information to people throughout the world is as relevant today as it was when I worked on its IPO. Technology has been a catalyst for economic growth throughout human history. The people on this call know that if a technological advancement is not the focus of every business and government, they will be left behind. Underpinning this is the need for sound and responsible investment. That has never been more important than today and certainly, that is Google and Alphabet's focus. I want to end by thanking Googlers around the world for the innovation and commitment that has enabled us to deliver such extraordinary products and services globally. I also want to thank our investors and analysts for your long-term support and your feedback. Thank you. Sundar, Philipp and I will now take your questions.

Operator

Thank you. [Operator Instructions] Your first question comes from Brian Nowak with Morgan Stanley. Your line is now open.

Brian Nowak

Thanks for taking my questions. First, thank you Ruth for all the help and significant impact over the past decade. The first one, it is a little bit of a jump ball, I guess for Sundar, Philipp or Ruth. I guess we're sort of 18 months this fever pitch around the GenAI focus in the world. Maybe from any of your perspective, can you just sort of talk to us about areas where you've seen faster than expected traction or testing adoption of some of the AI, generative AI capabilities versus slower than expected traction and testing from a Google perspective. And then, Ruth I appreciate all the comments about structurally reengineering the OpEx base. Are there any more tangible examples of areas you can talk to us about where you still see further ways to drive more efficiency across the company.

Thanks.

Sundar Pichai

Brian, thanks. I'll take the first part. I think it's a good question. Obviously, I think there is a time curve in terms of taking the underlying technology and translating it into meaningful solutions across the Board, both on the consumer and the enterprise side. Definitely, on the consumer side, I'm pleased, as I said in my comments earlier in terms of how for a product like Search, which is used at that scale over many decades. How we've been able to introduce it in a way that it's additive and enhances the overall experience and this positively contributing there. I think across our consumer products, we've been able -- I think we are seeing progress on the organic side. Obviously monetization is something that we would have to earn on top of it. The enterprise side, I think we are at a stage where definitely there are a lot of models. I think roughly, the models are all kind of converging towards a set of base capabilities. But I think where the next wave is, working to build solutions on top of it. And I think there are pockets, be it coding, be it in customer service, et cetera, where we are seeing some of those use cases seeing traction, but I still think there is hard work there to completely unlock those.

Ruth Porat

And on your second question first, thank you for your comments. Look, the reason we've consistently used the term, the phrase that we're focused on durably reengineering our cost base is because these are deep work streams. They are not tactical fixes, and we continue to build on them. And so the main areas that we've talked about are around product and process prioritization around organizational efficiency and structure. Both of those are reflected in the headcount and the fact that headcount is down year-on-year. And across all of those -- as I said, across our entire leadership team, we remain focused on continuing to execute against them. So in terms of the most recent examples, as we talked about last quarter with the combination of the devices and services product area with the platforms and ecosystems product area, we announced that back in April. And what we discussed last quarter and what we're seeing is that unifying teams across these organizations, helps with product execution and what we're really focused on is really adding to velocity and efficiency. So kind of the gift that keeps giving. And then more broadly, all of the work streams that we've talked to you about before, we continue to remain focused on. A big one, very important one, is all of the efficiency efforts, the work streams around technical infrastructure and improving efficiency there. We are also working on the use of AI across Alphabet. We are working on continuing to build on what we've done with our centralized procurement organization. We are continuing to optimize our real estate portfolio. And so again this is across our leadership team. These are efforts that all build to this phrase durably reengineering our cost base.

Brian Nowak

Great. Thank you both.

Operator

Our next question comes from Doug Anmuth with JPMorgan. Your line is now open.

Doug Anmuth

Thanks for taking my questions. One for Ruth and one for Sundar. Ruth you've now had Google Services operating margins roughly 40% for the past two quarters. Just as you create more capacity to help offset the future investments, is it reasonable to think that you could sustain at those kind of levels going forward? And then, Sundar just as it relates to AI overviews, you talked about the positive trends there. Can you just help us understand where you are, how far along in rolling-out AI overviews and then any more color around kind of click-through rates and monetization levels relative to your traditional searches. Thanks.

Ruth Porat

So in terms of the Google services operating margin, it did reflect all the work that we are doing on durably reengineering the cost base. It also reflected the benefit of strong revenue performance in search. And so what I tried to lay out in the comments, as we look forward to the third quarter is operating margins will reflect the increases in depreciation and expenses associated with higher levels of our investment in technical infrastructure. It will also reflect higher expenses associated with the Pixel launch, due to the pull forward. So those are important factors. I would say, overall company-wide, it is important to note that we do expect to continue to deliver full year '24 Alphabet operating margin expansion relative to 2023, but I did want to highlight those important points as we look forward to Q3.

Sundar Pichai

And Doug, thanks. On the AI overview, we are -- we have rolled it out in the US and we are -- will be through the course of the year, definitely scaling it up both to more countries. And also, we have taken a conservative start focused on quality, making sure the metrics are healthy and so on, but you will see us expand the use cases around it, and we'll touch definitely more queries. All the feedbacks we have seen are positive. And on the monetization side, I think Philipp has touched upon it. Maybe Philipp, anything more you want to add there?

Philipp Schindler

Yes, look, innovation and improvements to the user experience on search have historically opened up new opportunities for advertisers. We talked about this before we saw this when we navigated from desktop to mobile for example. And we can see GenAI obviously expand the types of questions we can help people with, as Sundar mentioned. And as we said before, people are finding ads either above or below AI overviews helpful. We have a solid baseline here from which we can innovate and as you have probably noticed at GML, we announced that soon we'll actually start testing Search and Shopping ads in AI overviews for users in the US, and they will have the opportunity to actually appear within the overview in a section clearly labeled as sponsored, when they're relevant to both the query and the information in the AI overview, really giving us the ability to innovate here and take this to the next level.

Doug Anmuth

Thank you. Best of luck, Ruth, in your new role.

Ruth Porat

Thank you.

Operator

Our next question comes from Michael Nathanson with Moffett. Please go ahead.

Michael Nathanson

Thanks. I have two, one for Sundar and one for Philipp. Sundar, on decision this week to not deprecate cookies. I know it's been a long journey. Can you talk a bit about what we should expect in terms of new experience in Chrome and why the company makes a decision not to go down the path on deprecating cookies. And then Philipp, I know it's only one quarter, but it's interesting that Search is growing faster than YouTube, which surprised some of us. But can you talk about what factors you think are kind of differences in growth rates between these markets? And is there anything on the AI front that you could see maybe reaccelerating YouTube growth, as you've seen happen with Search. Thanks so much.

Sundar Pichai

And Michael on cookies, Look I think, obviously we are super committed to improving privacy for users in chrome and there was the whole focus around privacy sandbox and we remain committed on the journey, but on third-party cookies, given the implications across the ecosystems and considerations and feedback across so many stakeholders. We now believe user choice is the best path forward there and we'll both improve privacy by giving users choice and we'll continue our investments in privacy enhancing technologies, but it is obviously an area we will be taking feedback from the players in the ecosystem and we are committed to being privacy first as well.

Philipp Schindler

And on the second part of your question, maybe Ruth, you want to jump in first and then I take the rest if needed.

Ruth Porat

Absolutely. So Look, as we both noted, search revenues really reflected broad based growth across verticals. That was led by retail followed by financial services. I think your question really goes to the heart of the year-on-year growth comparison. And as both Philipp and I noted, we are really pleased with YouTube, the YouTube team all that was done, it was driven by brand followed by direct response, and they have very strong ongoing operating metrics, which Philipp will comment on. I think the important point to note, and I tried to tease out in opening comments, was that the deceleration in this year-on-year revenue growth for the second quarter versus the first quarter, primarily reflected the tougher comparison versus the first quarter because at that point, as you probably recall, YouTube was lapping negative year-on-year growth in Q1 last year. And then also Q1 benefited from the extra from leap year. And so what you are also seeing here is with YouTube, we were [anniversaring] (ph) the ramp in APAC based retailers that began in the second quarter last year and foreign exchange headwinds as well that we noted. And so it's -- there are some timing issues going on. And what we are trying to highlight is the underlying operating strength. Back to you, Philipp.

Philipp Schindler

Yes, that was very comprehensive. Nothing really to add from my side here.

Sundar Pichai

The only thing I would say, adding to Brian's first question on areas where things are maybe taking longer. I think, look we are all building multimodal models. At least Gemini has been natively multimodal from the ground up. But most of the use cases today that have been unlocked have been around the tech side. So in terms of getting real generative audio, video experience is working well. I think there is still -- it is going to take some time. But over time, obviously it will be deeply relevant to YouTube and so it's an area I'm excited about in the future.

Michael Nathanson

Okay. Thanks a lot. And best to you. Thanks.

Operator

Your next question comes from Eric Sheridan with Goldman Sachs. Your line is now open.

Eric Sheridan

Thanks so much. And I'll echo the thanks for Ruth, for all the insights and partnership over the years on these earnings calls. Sundar maybe first for you, in terms of Cloud and bringing AI to the enterprise, I wanted to know if you go a little bit deeper in terms of how you are seeing AI actually get adopted implemented, what it potentially could mean for the strategic positioning of the cloud business and the potential for AI workloads to be a stimulant to revenue growth for Cloud first. And then following up the last set of questions on YouTube are really about the macro or the ad environment. What do you guys, as a team, continue to learn about the subscription side of YouTube and the appetite for consumers to engage with a broader array of media products at the subscription layer. Thanks.

Sundar Pichai

Thanks Eric. Look, on the Cloud and AI stuff, obviously, it is something which I think will end up being a big driver over time. I mentioned in my opening remarks, already if you take a look at our AI infrastructure and generative AI solutions for cloud across everything we do, be it compute on the AI side, the products we have through Vertex AI, Gemini for Workspace and Gemini for Google Cloud, et cetera, we definitely are seeing traction. People are deeply engaging with Gemini models across Vertex and AI studio. We now have over 2 million developers playing around with these things, and you are definitely seeing early use cases. But I

think we are in this phase, where we have to deeply work and make sure on these use cases, on these workflows. We are driving deeper progress on unlocking value, which I'm very bullish will happen, but these things take time. So -- but if I were to take a longer-term outlook, I definitely see a big opportunity here. And I think particularly for us, given the extent to which we are investing in AI, our research infrastructure leadership, all of that translates directly. And so I'm pretty excited about the opportunity space ahead.

Ruth Porat

And then on your second question with respect to subscriptions, I am implicit in your question, how strong is it, as I noted in opening comments, that overall line subscriptions platforms and devices delivered healthy growth and that was led by subscriptions. And as we've said on many calls here in a row, the subscription revenue growth continued to be quite strong. It was driven by subscriber growth in both YouTube TV and YouTube Music premium. And then the other component within that line is Google One that also delivered strong subscriber and revenue growth. I think the heart of your question is really around YouTube and that is the heart of the revenues in that line. So it continues to be very strong. We see a lot of take up in it, strong subscriber growth, really pleased with it. We did note that growth on that line decelerated due to anniversarying the YouTube TV price increase. But at the heart of it, our people interested in the subscription offerings and it's the take of significant. We're really pleased with it.

Eric Sheridan

Thank you.

Operator

Our next question comes from Ross Sandler with Barclays. Your line is now open.

Ross Sandler

Hi, everybody. Just two questions on the AI CapEx. So it looks like from the outside at least, the hyperscaler industry is going from kind of an under bill situation this time last year to better meeting the demand with capacity right now to potentially being overbuilt next year if these CapEx growth rates keep up. So do you think that's a fair characterization? And how are we thinking about the return on invested capital with this AI CapEx cycle. And then related to that, do you think that the AI industry is close to or far away from hitting some kind of wall on foundation model improvement in AI training, based on like lack of availability of new data to train on. Just your thoughts on that would be great. Thank you.

Sundar Pichai

Thanks Ross. I think great questions. Look, I -- obviously, we are at an early stage of what I view as a very transformative area and in technology when you are going through these transitions, aggressively investing upfront in a defining category, particularly in an area in which in a leveraged way cuts across all our core areas our products, including Search, YouTube and other services, as well as fuels growth in Cloud and supports the innovative long-term Bets and Other Bets is definitely something for us makes sense to lean in. I think the one way I think about it is when we go through a curve like this, the risk of under-investing is dramatically greater than the risk of over-investing for us here, even in scenarios where if it turns out that we are over investing. We clearly -- these are infrastructure, which are widely useful for us. They have long useful lives and we can apply it across, and we can work through that. But I think not investing to be at the frontier, I think definitely has much more significant downside. Having said that, we obsess around every dollar we put in. Our teams are -- work super hard, I'm proud of the efficiency work, be it optimization of hardware, software, model deployment across our fleet. All of that is something we spend a lot of time on, and that's how we think about it. To your second question on whether -- how do the scaling loss hold. Are we hitting on some kind of wall or something? Look, I think we are all pushing very hard, and there is going to be a few efforts, which will scale up on the compute side and push the boundaries of these models. What I would tell is regardless of how that plays out, you still think there is enough optimizations we are all doing, which is driving constant progress in terms of the capabilities of the models. And more importantly, taking them and translating into real use cases across the consumer and enterprise side, I think on that frontier. I think there is still a lot of progress to be had. And so we are pretty focused on that as well.

Ross Sandler

Thank you.

Operator

Our next question comes from Stephen Ju with UBS. Your line is now open.

Stephen Ju

Okay. Thank you so much. So Sundar, I guess to ask the AI question a different way. As we talk to some of the model builders out there, it looks like the initial use cases are more on the cost savings or efficiency side. But when do we -- when do you think we'll start thinking about products that can help revenue generation for the Fortune 500, Fortune 1000 companies, which is probably something that can hopefully create greater value over time versus just cutting costs? And Philipp, listening to what will be, I guess Ruth's final comments on Q2 on these public calls. And thank you, by the way Ruth, for all the help. I couldn't help but notice that the bigger factors were brand followed by direct response. And if we continue to think that the one you bring up first is the larger factor and tying this into your prior commentary about shopping being an important consideration. When do you think we'll start talking about direct response being a much bigger contributor to YouTube's growth versus brand? Thank you.

Sundar Pichai

On the first part of the question look I think the technology's horizontal enough, it can apply on both sides. If you take a use case like improving the customer service experience, it is part of it which is driving efficiencies, and you can look at it from a cost standpoint, but you could also be overall improving the experience, improving conversion, driving the funnel better. And so increasing basket size if you are a retail e-commerce player, et cetera. So we are seeing people experiment across both sides. And so I think, you will see it played across both sides. Philipp, on the second one?

Philipp Schindler

Yes. On the second one, look on the direct response side, as you know it is about driving and converting commercial intent and customers are obviously benefiting from including video in their AI-powered campaigns, it could be PMax, it could be DemandGen and obviously using our automated tools to enhance and create video creatives. And we are very, very optimistic about this path. On average advertisers who run both image and video ads with DemandGen campaigns see 6% more conversions per dollar than those running image only ads and discovery. And this is just one little example of how this can obviously boost your performance business. So that's a big part. The brand side, as you know Google AI continues to make it easier for brands to show up next to the content where viewers are obviously the most engaged. And they're finding it, as you can see from the numbers, a very effective way to drive awareness and consideration. And we are also quite excited about some of the recent launches on YouTube shopping side, if you want to put that into the direct response bucket.

Stephen Ju

Okay. Thank you.

Operator

And our last question comes from Justin Post with Bank of America. Your line is now open.

Justin Post

Great. I'll ask a couple of areas. First on the cloud acceleration, would you characterize that as new AI demand helping drive that year-to-date? Or is that more of a rebound in just general compute and other demand or is AI really moving this forward and helping drive acceleration. And then I wanted to ask about your internal cost savings which has been really strong. How are you using AI internally to help cut costs? Are you seeing better efficiencies with your engineers? And just would love to hear about how you are applying AI to cut your own costs? Thank you.

Ruth Porat

Great. Thank you for that. So overall we are -- as both Sundar and I said, we are very pleased with the results in Cloud. And there is clearly a benefit as the Cloud team is engaging broadly with customers around the globe with AI related solutions, AI infrastructure solutions and the generative-AI solutions. I think we noted that we're particularly encouraged that the majority of our top 100 customers are already using our generative AI solution. So it is clearly adding to strength of the business on top of all that they are doing. And just to be really clear, the results for GCP, the growth rate for GCP is above the growth for cloud overall. And then I'll turn it to Sundar on the cost saving point, but just one point we are really pleased as well that Cloud's margin improved as it did. And in part, that reflects the revenue strength that they delivered and all of the efficiency efforts that I've already spoken about. But looking ahead in Q3, we do expect the same seasonal pattern that you saw last year with respect to margin and we are continuing to invest in the business.

Sundar Pichai

Look, I think specifically, if the question is about engineers and coding, et cetera, we definitely want to be on the cutting edge there. I think, we are making these tools available to some of the most [line of] (ph) productive engineers and demanding engineers out there, and they are definitely kicking the tires hard. And -- but I would say, it's still all in very early stages. I think particularly when it comes to writing high-quality secure code, but I think all the learnings what we are gaining here will translate into our models and products, and that's the virtuous cycle, which I'm excited by. So there's a lot more to come.

Justin Post

Great, thank you.

Operator

Thank you. And that concludes our question-and-answer session for today. I'd like to turn the conference back over to Jim Friedland for any further remarks.

Jim Friedland

Thanks everyone for joining us today. We look forward to speaking with you again on our third quarter 2024 call. Thank you and have a good evening.

Operator

Thank you everyone. This concludes today's conference call. Thank you for participating. You may now disconnect.