This transcript is provided for the convenience of investors only, for a full recording please see the Q2 2024 Earnings Call webcast.

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. To ask a question during the session you will need to press *1 on your telephone.

I would now like to hand the conference over to your speaker today, Jim Friedland, Director of Investor Relations. Please go ahead.

Jim Friedland, Director Investor Relations: 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, CEO Alphabet and Google: Thank you, Jim. And hello, everyone.

I'm really pleased with our results this quarter. They show tremendous ongoing momentum in Search and great progress in Cloud, with our Al 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, and at the same time passed 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've 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're pleased to see the positive trends from our testing continue as we roll out Al 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 Al Overviews. And we see even higher engagement from younger users, aged 18-24, when they use Search with Al Overviews.

As we've said, we're continuing to prioritize approaches that send traffic to sites across the web. And we're 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 Al Overviews, Al 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've seen that Al 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 four 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 is truly bringing Al 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 Al product advances come from our longstanding 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 is our best-performing and most energy-efficient TPU to date.

It achieves a near 5X increase in peak compute performance per chip and is 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 will 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 Overview served flat.

And we are focused on matching the right model size to the complexity of the query, in order to minimize impact on costs and latency.

Separately, on our real estate investments, we're 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 their large customer base.

Our momentum begins with our AI Infrastructure, which provides AI start-ups 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 U.S. 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 broadened 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.

Cybersecurity 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 help manage.

Our strong track record of uptime, quality control and reliability make 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 Brandcast this quarter, and Philipp will say more. I'm pleased at the progress here. YouTube has remained number one in U.S. streaming watchtime, according to Nielsen. Views of YouTube Shorts on connected TVs more than doubled last year, and we're making it easier for creators to add captions, and turn regular videos into Shorts.

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 Al-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 is making, a real leader in the space and getting rave reviews from users. Waymo has served more than 2 million trips to date, and driven more than 20 million fully autonomous miles on public roads. Waymo is 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, Philipp.

Philipp Schindler, SVP and CBO, Google: 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 & 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 in 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 are 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 Cannes, 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 Al and keep pace with the evolving expectations of customers and users. Across Search, PMax, Demand Gen and Retail, we are applying Al to streamline workflows, enhance creative asset production and provide more engaging experiences for consumers.

Listening to our customers, retailers in particular have welcomed Al-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, prompt the AI with something like "feature this product with the 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 are beta testing virtual try-on in 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 Al-driven profit optimization tools have been expanded to Performance Max and Standard Shopping campaigns. Advertisers who use profit optimization in Smart Bidding see a 15% uplift in profit, on average, compared to revenue-only bidding.

Lastly, Demand Gen is rolling out to Display & 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, Demand Gen delivers an average of 14% more conversions.

The use cases we are seeing across the industry show the incredible potential of these Al-enabled products to improve performance. Let me briefly share two examples with you.

Luxury jewelry retailer Tiffany leveraged Demand Gen during the holiday season and saw a 2.5% brand lift in consideration and actions, such as adding items to carts 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 Demand Gen 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, Al-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, MrBeast'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 one most-watched streaming platform on TV screens in the U.S. 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 watchtime 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 watchtime 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 the many ways their plans and offerings can be customized to fit people's lives. Using Al-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 38% higher conversion rate versus other ads.

Turning to Shorts. Last quarter, I shared that in the U.S., the monetization rate of YouTube Shorts relative to instream viewing is showing a healthy rate of growth.

Again, this quarter, we continued to see an improvement in Shorts monetization, particularly in the U.S. We're 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 watchtime for videos that help people shop. While it's still 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 Googlers 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, President and Chief Investment Officer; CFO, Alphabet and Google: 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 re-engineer 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 will do so again next quarter.

We ended the guarter with \$101 billion in cash and marketable securities.

Turning to segment results. Within Google Services, revenues were \$73.9 billion, up 12%.

Google Search & 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%.

Subscriptions, 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 watchtime 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 the price increase for YouTube TV 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 profits. As Sundar noted, year to date, our Al Infrastructure and Generative Al 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 Al 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 are 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 multiyear 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 have 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 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. As a reminder, to ask a question, you will need to press *1 on your telephone. To prevent any background noise, we ask that you please mute your line once your question has been stated.

Your first question comes from Brian Nowak with Morgan Stanley. Your line is now open.

Brian Nowak (Morgan Stanley): Thanks for taking my questions. First, thank you Ruth for all of the help and significant impact over the past decade.

The first one, it's a little bit of a jump ball, I guess, for Sundar, Philipp or Ruth. I guess we're sort

of 18 months into this fever pitch around a GenAl focus in the world. Maybe from any of your perspectives, can you sort of talk to us about areas where you've seen faster-than-expected traction, testing, or adoption of some of the Generative Al capabilities versus slower-than-expected traction and testing, from a Google perspective?

And then Ruth, appreciate all the comments about structurally re-engineering 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, CEO Alphabet and Google: 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 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 is positively contributing there.

I think across our consumer products, we are seeing progress on the organic side. Obviously, monetization is something we will have to earn on top of it.

On the enterprise side, I think we are at a stage where there are definitely a lot of models. I think roughly the models are all kind of converging towards a sort of base capabilities but I think where the next wave is working is 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's hard work there to completely unlock those.

Ruth Porat, President and Chief Investment Officer; CFO, Alphabet and Google: And on your second question, first, thank you for your comments.

Look, the reason we consistently use the term, the phrase, that we're focused on durably re-engineering our cost base is because these are deep workstreams. They're 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. 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 workstreams 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 workstreams around technical infrastructure and improving efficiency there.

We're also working on the use of Al across Alphabet. We're continuing to build on what we've done with our centralized procurement organization. We're 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 re-engineering our cost base."

Brian Nowak (Morgan Stanley): Great. Thank you both.

Operator: And our next question comes from Doug Anmuth with JPMorgan. Your line is now open.

Doug Anmuth (JPMorgan): Thanks for taking 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 Al Overviews, you talked about the positive trends there. Can you just help us understand where you are, how far along in rolling out Al Overviews? Then any more color around sort of click-through rates and monetization levels relative to your traditional searches? Thanks.

Ruth Porat, President and Chief Investment Officer; CFO, Alphabet and Google: So in terms of the Google Services operating margin, it did reflect all the work that we're doing on durably re-engineering 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's important to note that we do expect to continue to deliver full-year 2024 Alphabet operating margin expansion relative to 2023, but did want to highlight those important points as we look forward to Q3.

Sundar Pichai, CEO Alphabet and Google: On the Al Overviews, we've rolled it out in the U.S. and we will be, through the course of the year, definitely scaling it up both to more countries and also we've 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 feedback we have seen is positive.

On the monetization side, I think Philipp has touched upon it. Maybe, Philipp, anything more you want to add there?

Philipp Schindler, SVP and CBO, Google: Yeah, 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 U.S. And they will have the opportunity to actually appear within the AI 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 (JPMorgan): Thank you. Best of luck, Ruth, in your new role.

Ruth Porat, President and Chief Investment Officer; CFO, Alphabet and Google: Thank you.

Operator: Our next question comes from Michael Nathanson with MoffettNathanson. Please go ahead.

Michael Nathanson (MoffettNathanson): Thanks. I have two, one for Sundar and one for Philipp.

Sundar, on the 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 your experience in Chrome? And why the company made the decision not to go down the path of deprecating cookies?

Philipp, I know it was only one quarter, but it's interesting that Search is growing faster than YouTube, which surprised some of us. Can you talk about what factors you think are behind the difference between growth rates between these markets? Is there anything on the AI front you can see maybe reaccelerating YouTube growth, as you have seen happen in Search? Thanks so much.

Sundar Pichai, CEO Alphabet and Google: Michael, on cookies, obviously, we are super committed to improving privacy for users in Chrome, and that 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 will continue our investments in privacy-enhancing technologies. But it's 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?

Philipp Schindler, SVP and CBO, Google: 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, President and Chief Investment Officer; CFO, Alphabet and Google: Absolutely.

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 day from leap year. And so what you're also seeing here is, with YouTube, we were anniversarying 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 there's some timing issues going on, and what we're trying to highlight is the underlying operating strength.

Back to you, Philipp.

Philipp Schindler, SVP and CBO, Google: Yeah, that was very comprehensive. Nothing really to add from my side here.

Sundar Pichai, CEO Alphabet and Google: The only thing I would say 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 text side.

So in terms of getting real generative audio, video experiences working well, I think it's 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 (MoffettNathanson): Thanks, all. Best to you, Ruth.

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

Eric Sheridan (Goldman Sachs): 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, wanted to know if you would go a little bit deeper in terms of how you're seeing AI actually get adopted and 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 the questions on YouTube were 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, CEO Alphabet and Google: Thanks, Eric.

Look, on the Cloud and AI stuff, obviously, it's 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 the Gemini models across Vertex and Al Studio. We now have over 2 million developers playing around with these things.

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 and unlocking value, which I'm very bullish will happen. But these things take time.

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 and infrastructure leadership, all of that translates directly. And so I'm pretty excited about the opportunity space ahead.

Ruth Porat, President and Chief Investment Officer; CFO, Alphabet and Google: And then on your second question, with respect to the subscriptions, 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 takeup in it, strong subscriber growth. Really pleased with it.

We did note that growth on that line decelerated due to anniversarying this YouTube TV price increase. But at the heart of it are people interested in the subscription offerings, and it's a takeup that's significant. We are really pleased with it.

Eric Sheridan (Goldman Sachs): Thank you.

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

Ross Sandler (Barclays): Hi, everybody. Just two questions on the Al CapEx.

So it looks like, from the outside at least, that the hyperscaler industry going from kind of an underbuilt 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 Al 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 lack of availability of new data to train on? Just your thoughts on that would be great. Thank you.

Sundar Pichai, CEO Alphabet and Google: Thanks, Ross. Great questions.

Look, 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, 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. It is definitely something that for us makes sense to lean in.

The one way I think about it is when you go through a curve like this, the risk of underinvesting is dramatically greater than the risk of overinvesting for us here. Even in scenarios where if it turns out we are overinvesting, 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 front here, I think, definitely has much more significant downsides.

Having said that, we obsess around every dollar we put in. Our teams 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 how did the scaling laws hold, are we hitting on some kind of wall or something? Look, I think we are all pushing very hard and there's 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, I still think there is enough optimizations we're all doing which is driving constant progress in terms of the capabilities of the models.

And more importantly, taking them and translating them into real use cases across the consumer and enterprise side. I think on that frontier, I think there's still a lot of progress to be had. And so we are pretty focused on that as well.

Ross Sandler (Barclays): Thank you.

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

Stephen Ju (UBS): Okay. Thank you so much.

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 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 YouTube 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, CEO Alphabet and Google: To the first part of the question, look, I think the technology is horizontal enough, it can apply on both sides. If you take a use case like improving the customer service experience, there's a 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 eCommerce player, et cetera. So we are seeing people experiment across both sides. And so I think you will see it layered across both sides.

Philipp, on the second one?

Philipp Schindler, SVP and CBO, Google: Yes, on the second one, look on the direct response side, as you know, it's about driving and converting commercial intent. Customers are obviously benefiting from including video in their Al-powered campaigns. Could be PMax. Could be Demand Gen. 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 Demand Gen campaign see 6% more conversions per dollar than those running image-only ads on 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.

We're also quite excited about some of the recent launches on the YouTube Shopping side, if you want to put that into the direct response bucket.

Stephen Ju (UBS): Thank you.

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

Justin Post (Bank of America): Great. I'd like to ask about a couple of areas. First on the Cloud acceleration, would you characterize that as new Al demand helping drive that year-to-date or is that more of a rebound in just general compute and other demand? Or is Al 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, President and Chief Investment Officer; CFO, Alphabet and Google: Great. Thank you for that.

So overall, 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 Al-related solutions, Al Infrastructure solutions and the Generative Al Solutions.

I think we noted that we're particularly encouraged that the majority of our top 100 customers are already using our Generative Al Solutions. So it is clearly adding to the strength of the business on top of all that they're 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 will turn 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, CEO Alphabet and Google: 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 productive engineers and demanding engineers out there and they are definitely kicking the tires hard.

But I would say it's still all in very early stages, 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 (Bank of America): Great. Thank you.

Operator: Thank you. 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, Director Investor Relations: 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.