Q4 2020 Earnings Call

Company Participants

- Jim Friedland, Director of Investor Relations
- Philipp Schindler, Chief Business Officer
- Ruth M. Porat, Senior Vice President and Chief Financial Officer
- Sundar Pichai, Chief Executive Officer

Other Participants

- Brent Thill, Analyst
- Brian Nowak, Analyst
- Colin Sebastian, Analyst
- Doug Anmuth, Analyst
- Eric Sheridan, Analyst
- Heath Terry, Analyst
- Michael Nathanson, Analyst
- Stephen Ju, Analyst

Presentation

Operator

Welcome, everyone, and thank you for standing by for the Alphabet Fourth Quarter 2020 Earnings Conference Call. At this time, all participants are in a listen-only mode. After the speakers' 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 {BIO 22019382 <GO>}

Thank you. Good afternoon, everyone, and welcome to Alphabet's fourth quarter 2020 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, including the effect of the COVID-19 pandemic on those areas, may be considered forward-looking and such statements involve a number of risks and uncertainties that could cause actual results to differ materially. For more information, please refer to the risk factors discussed in our most recent Form 10-Q filed with the SEC. Additional information will also be set forth in our upcoming Form 10-K filing for the year ended December 31, 2020. During this call, we will present both GAAP and non-GAAP financial measures. A reconciliation of non-GAAP to GAAP measures is included in today's earnings press release, which is distributed and available to the public through our Investor Relations website located at abc.xyz/investor.

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

Sundar Pichai {BIO 15004624 <GO>}

Thank you, Jim, and good afternoon, everyone. 2020 was a year unlike any other. We are proud that people continue to choose Google's products to stay informed, connected and comforted during uncertain times. Being helpful to people in moments big and small is the foundation of everything we do.

The past year also accelerated the shift to cloud and adoption of online services. This has profound implications for all companies and consumers and we are pleased that so many trust us to help them make this transition. In particular, Google's products and support have been a lifeline for millions of small, medium businesses hit hard by the pandemic.

Today, I'll review some of the important work we have done this quarter across Google and Alphabet, with a particular focus on our growing cloud business, which we are breaking out as a separate segment for the first time. Then I'll welcome to the call Google's Chief Business Officer, Philipp Schindler, who many of you know from investor conferences and events. Philipp will speak about partnerships, business and advertising trends in the Google Services segment. We have heard you'd appreciate more texture and detail there. Then Ruth will go through the quarter in more detail.

First, some highlights at Google. Since the pandemic began, our teams have built new features and products to help people and businesses. Now, we are helping with the complex challenge of getting vaccines to billions of people around the world. Vaccination locations have started to rollout in Google Search and Maps. Google Cloud's Intelligent Vaccine Impact platform is helping authorities improve vaccine distribution and forecasting. We are providing substantial new ad grants to the CDC, the World Health Organization and others to promote vaccine education. We're also making direct grants to organizations addressing ratio and geographic disparities in vaccination access, plus opening up Google's facilities as vaccination clinics as needed.

Elsewhere, in Maps, we added a new community feed in the Explore tab and now you can track takeout and delivery orders when you book or order from Google Maps. At YouTube, we are building products to help creators benefit from two important trends. Live video and short-form video. More than 0.5 million channels live streamed on YouTube for the first time in 2020, from artists performing in their living rooms, to churches moving their services online. And videos in our new Shorts player are receiving 3.5 billion daily views. We are looking forward to expanding Shorts to more countries this year.

Philipp will dive into the work to support online commerce and our partners, but I want to call out our News Showcase product. It's a $1 billion investment in partnerships with news publishers, and I'm really excited about our progress here. We have now signed agreements with nearly 450 publications, the majority of which are local and regional across a dozen countries, including France, Germany, UK and Brazil. And last month, we announced a new global deal with Reuters as well as an agreement with one of the major French publishing associations to open access to News Showcase. We want to do more partnerships in more countries and we'll have more to announce in the weeks to come.

Among other highlights, we also launched our reimagined Google Pay app, making it easier to organize finances and save money. It's now used by over 150 million people in 30 countries. In hardware, we recently closed our acquisition of Fitbit, which will improve our product pipeline and help make health and wellness accessible to more people. To all the Fitbit employees, welcome to Google. We have a great portfolio of products and I look forward to sharing more about our product lines.

Now, a closer look at Google Cloud. I'm very pleased with the progress here, and as Ruth will mention, we'll continue making disciplined investments to scale the business and improve profitability. Google Cloud delivered revenue growth of 47% year-over-year, with GCP growth remaining meaningfully above the growth rate for Cloud overall. In addition, our backlog grew to nearly $30 billion, up from $19 billion in Q3, nearly all attributable to Cloud.

We continue to invest strongly in the business, given the momentum we are seeing. These investments in our go-to-market organization have helped us win larger deals, including several billion dollar deals in 2020. Deals over $250 million more than tripled in the same period. We are also seeing strong growth through our broad network of partners, with our channel partner ecosystem growing more than 5 times and indirect channel revenue more than doubling in the past two years. Our industry-leading customer satisfaction, as identified in a recent report from IDC, is helping us drive significant expansion and net revenue retention with existing customers. Our products are mature and highly differentiated in many segments.

In infrastructure cloud, our leadership in multi-cloud and cyber security helped us win large data center and IT transformation deals with customers like Highmark Health and Vodafone, as well as cloud-native leaders including Wayfair and Etsy. Our leading data and analytics cloud provides new customers such as Kyoto University Graduate School of Medicine and Healthcare and MercadoLibre in retail with the ability to analyze any data in real-time across any cloud. Our industry solutions based on our AIML expertise have helped us win customers like Optus and Communications and Autogroup in retail.

I'm also particularly excited to see us winning large transformations by bringing the entire breadth of Google's technology to customers. Yesterday, we announced our multiyear partnership with Ford, which is using Google Cloud, Android and other Google apps and services to transform their business. Google Workspace, industries only cloud-native communication and collaboration solution, is helping companies meet their evolving hybrid workplace needs. Workspace is driving innovation at many of the fastest growing companies. Additionally, this quarter, we expanded our partnership with SAP. They'll extend their usage of Google Cloud for their cloud solutions, including SAP business technology platform to provide the best experience for our joint customers.

Across Alphabet portfolio, our investments in AI continue to drive progress. For example, DeepMind's AI protein folding breakthrough will enable researchers to tackle new and difficult problems from fighting diseases to environmental sustainability, Google's partnership with Mayo Clinic in developing AI systems that can help plan radiotherapy treatments. Waymo is now providing hundreds of fully autonomous rides per week and recently partnered with Daimler Trucks to develop fully autonomous trucks.

To wrap up, last year, I talked about our four big themes of helpfulness, trust, execution and sustainable value. These will continue to guide our strategic focus across the company in 2021 and beyond, as we continue to advance our core information mission and products like Search, Maps and YouTube, keep people's information safe and secure, drive substantial advancements in AI over the next three years and ensure we're the most effective place to work beyond COVID, all supported by sustainable long-term businesses. I want to thank our teams across Google and Alphabet for all of their work this quarter and throughout all of 2020. 2021 gives us another chance to be helpful to people, businesses and communities. While there is hard work ahead, I'm profoundly optimistic about what we will accomplish together.

With that, I'll turn it over to Philipp.

Philipp Schindler {BIO 21014597 <GO>}

Thanks, Sundar, and good afternoon, everyone. It's great to be joining you today. We're pleased with Google Services revenue of $52.9 billion in the fourth quarter, which continued the significant rebound from the negative impact of COVID earlier in the year. Two trends drove the strong results across Search, YouTube and network advertising. Consumers continued to move more of their activity online and advertisers responded to this shift in consumer behavior by reactivating spend that they had passed earlier in the crisis.

In the fourth quarter, retail was the largest contributor to the year-on-year growth of our ads business. Tech, media and entertainment and CPG were also strong contributors. The trajectory of Search advertising over the past year demonstrates its responsiveness to consumer interest and needs and how marketers can quickly adjust their spending as circumstances change to focus on generating ROI for their businesses.

In YouTube, direct response had a substantial year-on-year growth throughout the entire year, including the fourth quarter. After substantial pullback at the outset of the pandemic, brand spending began to recover in the third quarter. Marketers realized that even if there was a pullback in consumer demand in the short-term, they needed to keep their brands in front of people to stay top of mind when spending pick back up. In the fourth quarter, we saw significant acceleration of brand spending on YouTube.

Network revenues in the fourth quarter benefited from the same uplift and spend by advertisers, particularly in AdMob and Ad Manager. Google other revenues were driven by growth in YouTube's non-advertising revenues, primarily from subscriptions as well as by Google Play revenue growth.

I now want to step back from the results of the quarter and quickly reflect on the generational shift to digital we've seen over the past year and what that means for our business. First, dramatic changes to consumer behavior have fundamentally changed the way companies are doing business across many industries and geographies. Lufthansa or in German, Lufthansa, is a great example. Like many airlines, they needed more insight on where to fly, at what capacity and how often as travel started to open up last year. Over the summer, we've built a product called Flight Demand Explorer, which gave real-time answers to these questions helping them find demand and ramp up. Within two months, they tripled destination routes and got more than 80 planes back in the air with many flights fully sold out within days.

We're putting real-time insight into the hands of businesses in other verticals. In fact, we just launched a new Insights page to give our advertisers the latest on ever-changing search trends relevant to their business right inside of Google Apps. Petco was another great example, as people adopted an unprecedented number of pets during shelter-in-place. It led to a spike in demand for pet supplies and Petco saw their curbside pickup services go through the roof. So, they accelerated delivery and pickup options using Search, Shopping and local inventory ads, and were able to drive a 100% increase in their e-commerce business. And this is important. Multi-touch points like curbside pickup and pickup in store are in high demand and here to stay. We've seen huge year-on-year jumps in searches for available near me and curbside pickup, retailers offering multi-touch are benefiting from this trend and this offering sits clearly in our core capabilities with Maps and Search.

Let me tell you about L'Oreal. They did a great job adapting to changes in shopping behavior by making a sharp pivot to e-commerce and to TrueView. By making existing video creators more timely and actionable, their Kiehl's US brand drove record visits to their site from YouTube, 4x more per dollar. They're also partnering with us to bring AR experience for their cosmetics across Google surfaces, including YouTube and Search. I could go on and on. Companies are rapidly adapting.

Next, I'd like to talk about how we are evolving our common strategy. We've taken significant steps to accelerate an open ecosystem for online retail that benefits businesses of all sizes from large online household names to your neighborhood storage just around the corner. We've long said that we want to make Google the best place for users to start their shopping journeys regardless of where those journeys end. In the fourth quarter, the year-over-year growth rates in retail searches was more than 3 times the rate we had seen in the same period last year, driven in part by COVID.

We also want to make Google the best place for merchants to connect with users, regardless of whether the transaction happens on our platform or theirs. Over the last 12 months, we grew our merchant community over 80% with significant growth in small and medium-size businesses. All of these merchants and their inventory will show up across Google, including Search, image search and YouTube.

I want to close by talking about something that has been a principal of Google since our founding. We've always believed that the future of Google and the future of our partners are fundamentally linked. In fact, we build our business on revenue share models that support a broad range of partners, including large and small online publishers, individual YouTube creators broadcasting from their homes and global music labels, as well as Google Play developers of all sizes. We only succeed when our customers and partners succeed.

One number I think is worthwhile highlighting in this context. Over the past three years, we paid out nearly $140 billion to our partners from Google Play developers and publisher partners using our advertising services to YouTube creators, artists and media organizations around the world. Our performance is only possible because of our customers and partners. I want to thank them for their partnership, collaboration and feedback. I also want to thank our product, partnership, sales and many support teams for the tremendous work innovating to help our users, customers and partners succeed, especially through these difficult times.

I'll now hand off the call to Ruth.

Ruth M. Porat {BIO 2536317 <GO>}

Thank you, Philipp. We are very pleased with our exceptional fourth quarter performance after an unprecedented year. For 2020, total Alphabet revenues were $183 billion, up 13% year-on-year or up 14% in constant currency. With our new segment disclosures this quarter, I'll start with quarterly results at the Alphabet level, followed by segment results and conclude with our outlook. My focus will be on year-on-year comparisons for the fourth quarter, unless I state otherwise.

For the fourth quarter, our consolidated revenues were $56.9 billion, up 23%, which reflect broad-based increases in advertiser spending in Search and YouTube within Google Services, as well as ongoing strength in Google Cloud. Our total cost of revenues was $26.1 billion, up 24%, primarily driven by other cost of revenues, which was $15.6 billion and up 25%. The biggest factors here were, first, content acquisition costs primarily driven by costs for YouTube's advertising supported content, followed by costs for subscription content. And second, costs associated with data centers and other operations, including depreciation.

Operating expenses were $15.2 billion, down 4%. The year-on-year decline reflects the lapping of valuation-based compensation charges in certain Other Bets in the fourth quarter of 2019, primarily in R&D, as well as the impact of actions taken earlier in the year as a result of COVID. Each of the three components of OpEx also reflects our decision to slow headcount growth beginning late in the first quarter. Headcount was up 3,180 from the third quarter. Again, the majority of new hires were engineers and product managers with continued aggressive investment in cloud for both technical and sales roles.

Operating income was $15.7 billion, up 69%, and our operating margin in the quarter was 28%. Other income and expense was $3 billion, which primarily reflects unrealized gains in the value of investments in equity securities. Net income was $15.2 billion, operating cash flow was $22.7 billion with free cash flow of $17.2 billion in the quarter and $43 billion for the full year 2020. We ended the fourth quarter with $137 billion in cash and marketable securities.

Let me now turn to our segment financial results. Starting with our Google Services segment, total Google Services revenues were $52.9 billion, up 22%. Each component of our advertising revenues reflects the return of advertiser spend in response to the continued movement of consumer activity online that Philipp spoke about, including Google Search and other advertising revenues of $31.9 billion in the quarter, up 17%. YouTube advertising revenues of $6.9 billion, up 46% driven by a rebound not only in brand advertising, but also ongoing strength in direct response. Network advertising revenues of $7.4 billion, up 23%. Other revenues were $6.7 billion, up 27%, primarily driven by growth in YouTube non-advertising and Play revenues.

Within Play, app revenues in the fourth quarter continued to benefit from elevated levels of engagement, reflecting increases in active buyers and spend per buyer due to COVID. However, we did experience a deceleration in growth from the levels we saw in the third quarter. Google Services operating income was $19.1 billion, up 41%, and the operating margin was 36%.

Turning to the Google Cloud segment, including GCP and Google Workspace. Revenues were $3.8 billion for the fourth quarter, up 47%. GCP's revenue growth rate was again meaningfully above Cloud overall. Strong growth in Google Workspace revenues was driven by growth in both seats and average revenue per seat. Google Cloud had an operating loss of $1.2 billion, essentially flat versus last year. As to our Other Bets, for the full year 2020, revenues were $657 million, primarily generated by Fiber and Verily and reflect that most of our Other Bets are pre-revenue. The operating loss was $4.5 billion for the full year 2020 versus an operating loss of $4.8 billion in 2019.

Let me end with our outlook for each segment and our investments more broadly. For Google Services, we're encouraged by the increase in consumer online activity and the return of advertiser spend as reflected in our Q4 results. Looking forward to 2021, year-over-year quarterly comparisons will be affected meaningfully by the impact of COVID last year with easier comps in the first half, especially in Q2, and then lapping stronger performance in the second half. With respect to other revenues, with the closing of the Fitbit acquisition earlier this month, we will be reporting its revenues within Google Other.

In terms of investment levels within Google Services, late in the first quarter of 2020 as a result of COVID, we made what we described as tactical adjustments to slow the pace of spend in certain categories. Given the ongoing uncertainty in the external environment, we maintained the discipline through the rest of 2020. Looking forward, we do expect the pace of investment to increase to support the extraordinary opportunities we see, given the usefulness of our products and services in this environment. The investment pace will ramp up over the course of the year.

As for Google Cloud, we've obviously been investing aggressively, given the substantial market opportunity we see. Under Thomas Kurian's leadership, we further accelerated investment to strengthen the position of the business. For example, we are on track to meet our near-term goal of tripling the size of the Cloud direct sales force and have greatly expanded the partner channel. We've also substantially improved our product offering, while rationalizing our approach to focus on our six key industry verticals, and we've invested in expanding our network of locations for compute capacity to support Cloud ending 2020 serving customers in 24 regions and 73 zones.

We're encouraged by the momentum in the growth of revenue and customer wins. We more than doubled revenues over the last two years from $5.8 billion in 2018 to $13.1 billion in 2020. Our backlog, which is nearly all attributable to Cloud, nearly tripled from 2019 to 2020, although increases in backlog do not directly correlate to revenue trends, the growth in backlog demonstrates the success Google Cloud is having with large enterprises, which are signing meaningful long-term commitment agreements. Looking forward, we will continue to focus on revenue growth, driven by ongoing investment in products and the go-to-market organization.

Cloud's operating loss reflects that we have meaningfully built out our organization ahead of revenues, as we've discussed in prior quarters, with respect to the substantial investments in our go-to-market organization as well as engineering and technical infrastructure. Operating loss and operating margin will benefit from increased scale over time. In addition, we are focused on delivering on efficiency efforts across the board to contribute incrementally to profitability over time. Finally, as you can see from the historical data provided in the press release, Cloud's operating loss was higher in the first quarter relative to other quarters, and then the operating loss improves thereafter. We expect similar seasonality in 2021.

In terms of Other Bets, we continue to invest with a focus on the long-term value creation opportunity. On headcount, we plan to reaccelerate the pace of hiring in Google Services in line with our opportunities. Our headcount growth will also reflect the addition of Fitbit in our ongoing transition of certain customer support roles from third-party vendors to Google's in-house operation centers. We also plan to continue to prioritize investment in both sales and technical roles for Google Cloud.

Turning to CapEx at a consolidated level, the year-on-year results this quarter again reflect the slower pace throughout 2020 of investment in office facilities. Within technical infrastructure, servers continued to be the largest driver of investment in the fourth quarter, followed by data centers. Looking ahead, we expect a return to a more normalized pace of ground up construction and fit out of office facilities, which translates into a sizable increase in CapEx in 2021. Servers will continue to be the largest driver of spend on technical infrastructure.

Finally, a housekeeping point. As noted in our earnings press release, we have adjusted the estimated useful lives of servers and certain network equipment starting in 2021. We expect these changes will favorably impact our 2021 operating results by approximately $2.1 billion for assets as of year-end 2020. We look forward to the year ahead. Hope everyone stays safe. Thank you.

And now, Sundar, Philipp and I will take your questions.

Questions And Answers

Operator

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

Q - Eric Sheridan {BIO 17860961 <GO>}

Thank you so much for taking the question, and I hope everyone is safe and well on the team there as well. Maybe I'll try first on Cloud. I don't know if it's better to Sundar or to Ruth, but could you just conceptually help us understand how to think about the opportunity you're going after versus Cloud and how much it factors back into which you want to invest against the opportunity or possibly maybe even accelerate the opportunity by looking at inorganic paths to grow and scale vis-a-vis competition in the space?

And then maybe for Philipp, if I can. YouTube continues to evolve as a platform, there is now subscription offerings, you highlighted the strength you're seeing in DR. Could you talk a little bit about the paths for monetization in the coming years? And how we should think about the opportunity against the large scaled audience and engagement you see at YouTube broadly? Thank you so much.

A - Sundar Pichai {BIO 15004624 <GO>}

On Cloud, obviously, we see how early customers are in this shift. We see the large TAM ahead and definitely the market dynamics, and our momentum in the context of the market is what is the framework with which we are thinking about the scale of investments and the pace of investments. Obviously, it's an area in which the longer you are in, the cohorts add up and so contributes more and the economies of scale starts working as well. But we are definitely investing ahead to making sure we are able to serve the customers globally across all the offerings they are interested in, and that's how we are thinking about it.

Ruth, not sure you want to add more?

A - Ruth M. Porat {BIO 2536317 <GO>}

I think that's the main point, just given the sheer scale of the opportunity and our position investing to really position ourselves well across industries and geographies. And the key elements of it, I tried to call out in opening comments, investing in product, go-to-market, data centers, and you can see it in the results. I think you're going to continue to see us building there and that's what we're talking about building ahead. We are keenly focused on delivering for both customers and shareholders and that, of course, includes an intense focus on the path to profitability.

A - Philipp Schindler {BIO 21014597 <GO>}

Yes. And on your question on YouTube on the overall development and the subscription side, our direct response business on YouTube was practically non-existent three years ago. And now, it's one of our largest and fastest growing ad offerings on YouTube. And with TrueView for action, we actually make it easier for advertisers to unlock opportunities to reach audiences with video campaigns. And just to give you a few numbers, 60% of TrueView for action customers are new to YouTube and we more than doubled the number of active advertisers using TrueView for action in the first six months of 2020. And we're really tapping into the tremendous innate commercial behavior on the platform. 70% of YouTube viewers were saying they bought a brand as a result of seeing it on YouTube, I talked about L'Oreal earlier. MasterClass is another great example, online learning has become a huge opportunity and they use TrueView for action to connect the right people to the right content and saw really big, like 140%, increase in clicks to their site, 70% increase in sign-ups to courses and so on.

YouTube continued in our view to be amazing for brand advertisers as well. Our brand business was hit hard in the early stages of the pandemic, rebounded in Q3 and into Q4, and it really helps advertisers reach younger audiences they can't reach anywhere. We now reach more 18 to 49 year olds than all linear TV networks combined. Watch time is increasing. Advertiser effectiveness is getting better and better. And so, this is very nice development.

On the subscription strategy, maybe just briefly, music is an incredibly popular vertical on YouTube and obviously a key part of the overall experience. We found that users wanted a premium YouTube experience and we -- basically, the ability to download songs and videos, YouTube Premium provides additional revenue streams, of course, for music labels and publishers as well. In 2019, YouTube paid the music industry over $3 billion. We have over 30 million music and premium paid subscribers. We are now operating over in 95 countries. So, members get a lot of extra benefits. Yeah.

Operator

Thank you. And our next question comes from Doug Anmuth from J.P. Morgan. Your line is now open.

Q - Doug Anmuth

Great, thanks for taking the questions. Ruth and Sundar, I just wanted to follow up on Eric's question a bit. Anything else you can add just in terms of the significant inflection that you saw on Google Cloud backlog there? And, I guess, in particular, curious what you're seeing in terms of benefit and success as you're leveraging Alphabet more broadly, like in the Ford deal? And then how do you think about Google Cloud margins structurally kind of long-term relative to peers? Any color there would be helpful. Thanks.

A - Sundar Pichai {BIO 15004624 <GO>}

Maybe I'll start with the -- customers are looking for digital transformation. And depending on the sector they are in, they are definitely interested in a broader solution set across the breadth of what Google and Alphabet can bring. We see this in healthcare, our efforts in Google Health, work that's happening in Verily all end up helping. Ford is a great example of -- as they are thinking longer term, not just for Cloud, but Android auto powering their vehicles. And so, these are big transformations cutting across the company. And one of the areas where we are really executing is the -- leveraging our global business operations that Philipp runs and partnering closely with Thomas's teams. And that definitely brings in a lot of synergies here.

On your second question on the broader stuff, the one thing I would say is, and I mentioned a part earlier. We get into these long-term deals. And so, over time as you add more cohorts, that contributes to the margin structure. It is the scale of the product offerings, the number of areas and the number of regions in the world. This is a much more significant investment. And so, there is definitely a fixed cost structure associated with it and we are also investing ahead. But as we scale up the business, we expect the trends to be favorable.

Q - Doug Anmuth

Thank you.

Operator

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

Q - Brent Thill {BIO 1556691 <GO>}

Good afternoon. Yeah, you mentioned you accelerated -- saw accelerating brand spend in the quarter and many investors are asking the sustainability in what you're seeing in that as you head into the beginning of this year. If you could just talk directionally in terms of how your clients are acting as they head out of the holiday season? That would be helpful. Thank you.

A - Ruth M. Porat {BIO 2536317 <GO>}

Sure. I'll take that. As we've each noted, the financial results really did reflect this increase in advertiser activity and that was in part unlocking budgets that they had paused earlier in the year, as well as really reflecting the increase in consumer online activity. The largest contributor, as Philipp mentioned, was retail, the largest contributor year-on-year growth of the ads business, but I would say tech, media and entertainment as well as CPG were also meaningful contributors.

And for Search, we saw ongoing improvement in advertiser spend broadly. For YouTube, direct response, as Philipp talked about, really did maintain a very high level of growth and the acceleration in overall YouTube revenue growth reflects the pick up in brand advertising across all verticals on top of the ongoing strength that we saw in DR. And then in network, also same point, it's this pickup in advertiser spend, as Philipp noted, it was led by growth in AdMob and Ad Manager.

So, we are really pleased with Q4, it was a great end to a challenging year. And when we think about 2021, I made the point in opening comments, we obviously have easier year-on-year comparisons in the first half as we anniversary the effects of the pandemic. So, not much more to add. It was a strong quarter and we feel really good about the level of activity.

Q - Brent Thill {BIO 1556691 <GO>}

Thanks, Ruth.

Operator

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

Q - Heath Terry {BIO 3406856 <GO>}

Great, thank you very much. Appreciate the level of detail on the drivers behind the acceleration in Search and YouTube. I was wondering, if you could go a bit further and disaggregate -- or give even just qualitatively the drivers behind that acceleration between pre-pandemic advertisers returning to prior spending levels versus new advertisers or new advertiser spend being allocated to the platform?

A - Ruth M. Porat {BIO 2536317 <GO>}

Well, I think the main point is sort of this mega comment that we saw a slowdown. And, as Philipp said and we've talked about on prior calls, one of the first things that happens is a step back and then you see, as users reengage and activity picks up and the effectiveness of advertising, the ROI available, you see advertising come back in. And we -- I remember talking about this throughout last year that we had seen this actually going back to the prior financial crisis. And what you've seen is just a broad-based re-engagement, which we're really pleased about across industries. And it's also -- as Philipp noted in his comments, there has been a tremendous opportunity really to step in here and help small, medium businesses as they were evolving and adapting to this new digital world, and it's been quite key there as well.

Q - Heath Terry {BIO 3406856 <GO>}

Great. Thank you very much.

Operator

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

Q - Brian Nowak {BIO 16819013 <GO>}

Thanks for taking my questions. I have two for Philipp. Philipp, the first one, appreciate all the color on retail and commerce, the merchant community growing so strong in the last year. I'd be curious to hear about your discussions now with merchants and sort of what the largest friction points that they are looking for you to solve and sort of continue to help them as the world reopens, kind of the merchant discussions. And then secondly, a question on one of the earlier products on Discover feed. I'd love to hear about sort of early learnings on Discover feed and how you think about hurdles needed to overcome to monetize that?

A - Philipp Schindler {BIO 21014597 <GO>}

Yeah. Thank you. Thank you very much for the questions. Look, at the highest level, we want to build a healthier e-commerce ecosystem. When people come to Google to shop, we want them to help find the best products at the best prices from really the widest range of merchants and we want the results to be as comprehensive and relevant as possible. And we took some significant steps last year, as you know, on Google Shopping and in many ways we really see them as return to first principles here, free listings, zero commissions, really good feedback, helps lower barriers for online retail. So, we've become a great place for stores to connect with potential customers and -- whether it's by driving traffic to the websites for free listings or ads or just by making it easier for purchases to happen directly on Google. And by the way, let me be clear, also, shopping ads will continue to be a powerful way for retailers to promote their products, obviously.

So, overall, we're providing an open ecosystem that works for every kind of business, from national chains and online marketplaces, to just your small local stores. And we are giving retailers more choice, which is very well received by opening our platform to third-party providers. We talked about this, starting with PayPal and Shopify. And we brought YouTube into the fold and we began experimenting with a feature that lets you learn a lot more about product and videos on a limited set of channels and so on and so on. So, I would say, overall, it's very, very well received.

On the Discover side, Discover has grown -- so Discover is Discover and, obviously, Discovery Ads. So, Discover has grown dramatically since we launched it, I think, just three years ago. People are loving how we are surfacing relevant information, gorgeous visuals all in, what we call, Coriolis feed experience. And naturally some of these experience are commercial and we made Discovery Ads generally available about six months ago, I think it was May 2020. And it's already reaching up to 3 billion people across Discover, YouTube, Gmail and that's worldwide. And advertisers love what we're able to drive performance objectives by really matching their premium creators with Google Intent on our -- yeah, what we call, Coriolis surfaces.

Q - Brian Nowak {BIO 16819013 <GO>}

Great, thanks.

Operator

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

Q - Colin Sebastian {BIO 6373379 <GO>}

Great, thank you very much. Good afternoon. Maybe for Sundar or Philipp, a follow-up on YouTube. Just given the strength of those services, ads and subscriptions during the pandemic, I wonder if part of what we're seeing is more of an acceleration from the TV ad budgets from linear spending to more of YouTube spending, I mean, given also the momentum we've seen in over the top or over the last nine months or so. And then given some of the changing industry dynamics around privacy, including what you've already announced around browser cookies, wondering what plans might be as well for Android and how we should think about the potential impact on ad revenues broadly as a result of privacy changes? Thank you.

A - Philipp Schindler {BIO 21014597 <GO>}

Yeah, I can take that. We've seen brands steadily shift budgets to YouTube to complement their linear TV buys as TV audience has really become more fragmented. And as traditional TV ratings continue to decline, TV advertisers are turning to streaming platforms like YouTube to reach people who are no longer watching TV. Connected TVs are a fastest growing screen. In the US, we have over 100 million people that watch YouTube and YouTube TV on their TV screens each month. YouTube helps advertisers reach younger audiences they can't reach anywhere else. We've talked about it. YouTube reaches more 18 to 49 year olds than all linear TV networks combined.

And so there is an opportunity, big opportunity for YouTube to help brands and agencies really more easily connect with audience. And we are very invested in this space. And just to give you few examples. In the second half of last year, we launched a YouTube Masthead on TV screens to help advertisers drive awareness with large audiences in basically a single moment. Many are taking advantage of it, Uber, many others. We launched Brand Lift for YouTube on TV screens to really help advertisers make informed decisions about ad performance, optimize streaming campaigns in real-time and so on. And we also made it possible last year for advertisers to basically buy among the most popular YouTube and YouTube TV content viewed on the TV screens in one -- what we call, one single lineup.

Quickly on the third-party cookies strategy, in general, we know that expectations are really changing for how data is used online and people are demanding greater privacy. We are taking our responsibility to user privacy and to supporting our partners in the web ecosystem very, very seriously. In 2019, we announced the Privacy Sandbox, which is an open standards initiative to invent new technology that will replace third-party cookies with a set of privacy preserving mechanisms for the web, and we're making great progress. We've shared detailed proposal with the industry for experimentation and feedback. We shared recently as well our, what we call, FLoC, our Federated Learning of Cohorts, API, which we think provides an effective replacement signal for third-party cookies. And we really believe Privacy Sandbox is the best path forward and we remain very committed to our collaboration with the apps community on privacy preserving, open standard mechanisms that can, what we call, sustain a healthy and ad supported web.

Q - Colin Sebastian {BIO 6373379 <GO>}

Okay. Thanks, Philipp.

Operator

Thank you. And our next question comes from Michael Nathanson from MoffettNathanson. Your line is now open.

Q - Michael Nathanson {BIO 2009061 <GO>}

Thanks. Philipp, I was following up on Colin's question just perfectly. I wanted to understand the frameworks because you think about the bigger opportunity longer term and prioritize -- priorities in streaming video. Right? So, are you happy with the progress of YouTube TV so far? Will you expand into other countries? And if you could contrast that versus the opportunity you see in connected TVs and devices as you've done for Google TV or Chromecast? And then, is there a perceived added value from advertisers for this type of inventory, does it attract a new type of advertiser to offer YouTube TV inventory or connected TV inventory from traditional YouTube advertising?

A - Sundar Pichai {BIO 15004624 <GO>}

Maybe I'll comment on -- one of the things which has worked well for Google over the years is we really try to reach users where they are. And that's how Google has worked always. We've invested it across platforms, across devices, across countries. And I think the same applies for the YouTube experience. We want to bring it to the screen that's most convenient for users. And hence, our investments in Google TV, Chromecast, YouTube TV as a whole itself. And I think we are taking a long-term view here, obviously, focused on the user experience and really getting it all to work well. We know while smartphones are at the center for YouTube TV as an important form factor, and over time people will use it across multiple screens. And so, that's the experience we have focused on. And any time we create that experience, we know over time there is value to be captured commercially as well that makes sense for advertisers, but we take a long-term view.

A - Philipp Schindler {BIO 21014597 <GO>}

Yes. And I've talked about -- yes, and I talked about the connected TV part already, maybe briefly just on YouTube TV. YouTube TV continues to gain momentum. Our advertising efforts on YouTube TV itself are still very, very early, but we think there is an opportunity to apply some of our targeting and measurement capabilities to really provide a better user and advertiser experience over time. And, yeah, we heard from customers, they have a very strong interest in advertising and streaming environments. I mentioned how we combine it in the single lineups. So, that's an interesting path going forward.

Q - Michael Nathanson {BIO 2009061 <GO>}

Thank you.

Operator

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

Q - Stephen Ju {BIO 6658298 <GO>}

Okay, thank you so much. So, Sundar, I think let's -- I think you've recently talked about a 10 to 20 year journey for AI and quantum computing to unlock new use cases. And I think you've brought out in the past some of the ways AI is helping you with the products that you have in market right now. But as we take a more longer-term look into the future, what do you think some of the new applications could be? And I think, Philipp, it might have been -- a few years ago when you were speaking at an investor conference and you called out the desire to on-board and help SMBs, particularly as they really had no way to advertise before. And Google and online in general presented a golden opportunity to really help them grow their business. So, where do you think you are in terms of putting together an easy to use set of tools to help those who otherwise don't really have agency representation, so that they can reach all the different customers that they should be reaching across all of different services that you're offering? Thanks.

A - Sundar Pichai {BIO 15004624 <GO>}

Thanks, Stephen. I'll answer the AI part first. We've always wanted to be foundational in how we approach technological advances, and that's the core competency we invest in across the company. We're one of the largest R&D investors in the world and, obviously, AI is a big part of it. Just I'm really excited that we over the past few years, while we have made progress in understanding different modalities, be it text, images, voice, vision, et cetera, there is -- we definitely -- I think we are at an inflection point and we are investing to build better models and deepen our understanding and do it in a more generalized way. And when we do that, it will apply horizontally across our products. You saw version of that when we shipped BERT in Search and what was one of our biggest quality improvements, but you will see that flow across, be it Google Search, YouTube, Android, as well as our investments in Alphabet, be it self-driving cars or robotics. So, we take that view and definitely want to make sure we are driving state-of-the-art progress.

Philipp?

A - Philipp Schindler {BIO 21014597 <GO>}

Yeah. So, first let me recognize. I mean, it has obviously been a very, very challenging environment for SMBs. Many weren't online, many lost line of sight to demand overnight due to COVID. So, around this time last year, as soon as we saw the scale of the impact, we really accelerated product that gave our customers and especially our SMB customers signals to help them actually navigate and pivot. And as I noted earlier, as more consumers moved online and advertisers obviously responded by reactivating spend, we also saw our advertiser base grow, particularly the number of smaller advertisers or SMBs and we're helping them see shift in supply and demand, not just across sectors, but actually within sectors. For example, travel continues to get hit hard, pretty hard. And after the initial lockdown last year, searches for vacation homes and near me rentals saw huge spikes. That continues to fluctuate.

On the other hand, look at retail, demand isn't disappearing, it's shifting in many cases. We're seeing increases in searches for things like gym equipment, crafts, patio heaters and so on, anything related to outdoor activity and so on. We are obviously thinking about how to help SMBs on products like Maps, like over the last five years, we've made more than a 1,000 improvements to business profiles, making it a lot easier for merchants to connect with customers and especially now in the crisis in 2020, we added new features to, for example, provide COVID updates, service changes and new attributes like takeout, delivery, curbside pickup, now all easily available for consumers on Maps to connect them to their favorite SMBs. So, really incredible investment, frankly, from our side and I think it's very well received.

Operator

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

A - Jim Friedland {BIO 22019382 <GO>}

Thanks, everyone, for joining us today. We look forward to speaking with you again on our first quarter 2021 call. Thank you, and have a good evening.

Operator

Thank you. This concludes today's conference call. Thank you for participating, and you may now disconnect.
