# Morgan Stanley Technology, Media and Telecom Conference

# **Company Participants**

Ruth Porat, Senior Vice President and Chief Financial Officer

# **Other Participants**

Brian Nowak, Analyst, Morgan Stanley

#### **Presentation**

#### **Brian Nowak** {BIO 16819013 <GO>}

Good morning, everyone. It's great to see everyone live. Welcome to day two of our 2022 Morgan Stanley TMT Conference. We are thrilled today to have Ruth Porat with us, the CFO of Alphabet and Google. It is great to see you live.

#### **Ruth Porat** {BIO 2536317 <GO>}

It's great to be back here.

# **Brian Nowak** {BIO 16819013 <GO>}

We have a lot to talk about. Let me do the -- all the disclaimers first. Please note that all important disclosures including personal holdings disclosures and Morgan Stanley disclosures appear on the Morgan Stanley public website at www.morganstanley.com/researchdisclosures and they're also available at the registration desk.

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We have a lot to talk about. There is always a lot of things going on in the world, things going on with Alphabet and it's always good to connect with you. It's -- you're approaching your 7-year anniversary at Alphabet in a couple of months from now. I wanted to sort of -- I was stuck with this question with you and talk about investment and innovation. When you sort of step back at the key priorities at Alphabet for

where you're most focused on innovating for users, advertisers and the ecosystem, where are you most excited for what happens next?

## **Ruth Porat** {BIO 2536317 <GO>}

So there is a lot to talk about. Look, at the highest level, when we talk about investments, when we approach our investments, it's unchanged from what you and I have talked about over the years. We start with investing for long-term growth. And within that, every product area looks at how they can optimize within their portfolio and we focus on investing for operational excellence, everything around trust privacy, cyber security, content moderations. To the heart of your question, I think there are couple of areas to call out. First and foremost is Al. About 5-years ago, Sundar said that we are moving from mobile first to Al first and that Al, we would be able to apply across our products to really enhance experiences for everyone in the ecosystem, users, advertisers, merchants, governments, you name it. And you can see that in everything from Search and ads to YouTube and hardware.

But if you focus for example on Search, as hopefully many of you remember about a year or two ago, Sundar at IO said that Search remains our biggest moonshot and what we're really excited about with AI is the ability to make Search more human like, more conversational. We've talked about MUM and how that enables you to actually have a more human like interaction. You'll be seeing us for example with Lens, where you can take a photo of a bike and then just literally query, how do I fix it. And so we still think there is a lot to one, as a result of the enhancements with AI. The other obvious area is cloud and everything that's going on there. The number of times I said, we still think we're in early innings with cloud, super excited about the opportunity and again the progress, the momentum that we've seen and that's not just GCP, it's also with Workspace. And when you think about the importance of productivity tools, in particular, as we're moving to this hybrid work environment, super excited about what's going on there.

# **Brian Nowak** {BIO 16819013 <GO>}

Okay. AI, machine learning and cloud, a lot of focus. Let me go back to Search. You talked about Search, you've talked a lot over the years about just the runway there and the innovation there. I think over the last year or so, the Retail category of Search has been particularly strong. You've called it out in conference calls, our alpha-wise data show there is a rising number of people starting on Google with an ecommerce, advertisers and merchants seem more pleased than ever. Maybe just can you bring it down, double down for me a little bit, can you give us a couple of examples of specific improvements you made within the Retail Search category that have driven this user growth, the merchant spending and the overall more transactions per customers?

# **Ruth Porat** {BIO 2536317 <GO>}

Absolutely. So we did talk about it quite a bit on the Q4 call, it was an important contributor to results and when we talk about Retail, we obviously talk about ads as well as the broader set of experiences, all that Bill Ready is doing with commerce

and really excited about the effort that he has been leading. And I would say that a couple of the things that are really important from our perspective, is one, really connecting users to merchants and all that we're doing to create the best place for users and merchants. It is about building this open ecosystem. So the way we work as an example with Shopify and Square and again it's the open ecosystem that's important. And then using technology in ways to enable you to Search. So Lens again is a great example. It's bringing all of those to bear, whether it's in the commerce discussion that -- that we just went through, or all that we can do across the platform.

# **Brian Nowak** {BIO 16819013 <GO>}

The open ecosystem or Lens or the partnerships, are there examples of learnings you've had within Retail Search that you think could be applicable to other categories, as you think about healthcare, travel and other categories just because we're thinking about what happens next in Search, which categories are you most focused on?

## **Ruth Porat** {BIO 2536317 <GO>}

Yes, I love that question. When I think about what we're -- the way we describe what we're doing in Retail and Commerce. It is about creating the best experience for users and providers, merchants in the instance of all that Bill is doing. And so if you take that very simple framework and you say, what are we doing for example in travel, it's the same concept. It's about creating the best experience for users and everyone in the ecosystem. So for example, with users the question is, where do I go for inspiration, for best pricing, price comparison, for booking and that's what we're looking to do, which is, create access to updated relevant timely information so that you can go on that entire user journey in the most effective way. Similarly for travel providers, the notion is, how can you have this seamless connection to users. How can we create this open highly competitive vibrant ecosystem, so that you can connect to users. So it's a very similar concept, so as we described in Commerce.

# **Brian Nowak** {BIO 16819013 <GO>}

Okay. Next you can see that innovation to come then. Lets talk about YouTube a little bit. Again, strong year for YouTube in 2021, contributions, we think from both branded advertisers and direct response advertisers, \$29 billion of revenue growing over 40%. Two-part question on YouTube, sort of similar to Search, can you give us some examples of innovation that sort of spurred that strength in YouTube throughout 2021? And as now you sit here and look ahead to '22 and 2'3, what are the areas of potential improvements you see on YouTube to come to sort of keep that growth going?

# **Ruth Porat** {BIO 2536317 <GO>}

So, I think there are sort of two parts to your question as I hear it. One is, given you cited the year-on-year growth, obviously, as we talked about throughout last year, in many respects, that growth reflects how challenging 2020 was as much as anything.

So we have the benefit of lapping, we called it out throughout last year and that was an important driver of what those numbers look like. That being said, the team does continue to focus on innovation and different new opportunities, whether it's Shorts or Shopping and so we do continue to iterate and look at opportunities within YouTube, building on the strong base that we have.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. Let's talk about Shorts then, there is a lot of discussion about the creator economy and all big platform sort of trying to address the creator economy and short form video. For YouTube Shorts you have Shorts receiving 15 billion daily views, 5 trillion all-time views, probably higher now since that blog came out. Susan has spoken quite a bit about the importance of the creator economy. Maybe just help us understand how you look to differentiate YouTube in the creator economy for both creators versus other platforms, as well as how do you ensure that you're getting users engagement and monetizing those Shorts?

## **Ruth Porat** {BIO 2536317 <GO>}

So, it's still early in Shorts to state the obvious, but I think when we look at it, we're starting with a strong base. The YouTube Partner Program was started about 15-years ago and as a way to provide support to creators, so they can build thriving businesses basically on YouTube. We have 2 million creators who are building businesses through the Partner Program. And we're looking, as we look at extending this to Shorts, we're still experimenting with what's the best approach to monetization. So as many of you are aware, we did create \$100 million fund for creators. That's one of the early iterations, but it is early and we're continuing to look at what monetization is. I would say one of the other important elements of YouTube generally and as it relates to Shorts, is the investments that we continue to make in the content moderation and really protecting what is a healthy appropriate vibrant ecosystem.

# **Brian Nowak** {BIO 16819013 <GO>}

YouTube, it's fascinating when we were putting together these questions, I look at all the questions over the years on YouTube and there's been a lot of different strategies. YouTube when you have billions of users, trillions of hours of content, there is a lot of opportunities. And we've gone from subscriptions, premium video, music content, YouTube TV, Shorts, creator economy, shopping, there is a lot. As you look back at the last 5-years on YouTube, can you give us an example of one or two of the strategies that maybe didn't quite scale as well as you hoped, why did that happen and what did that teach you about sort of what works well? What does not work well on YouTube?

# **Ruth Porat** {BIO 2536317 <GO>}

Yes. That's important because we talk a lot about the successes as much what you do is what you don't do and the whole notion of prioritizing within each of our product

areas. I would say one of the areas that iterated -- reiterated quite a bit was what we were doing with YouTube Original.

## **Brian Nowak** {BIO 16819013 <GO>}

Right.

## **Ruth Porat** {BIO 2536317 <GO>}

And so originally we thought, let's take YouTube Originals and create this as a really interesting offering as part of our subscription offering, we then said, you know let's open it up for the ad supported part of YouTube and sort of iterated there as well. And I think you went through a great list of different areas what the team is working on and our view is, if we're thinking about highest and best use where to focus, that wasn't -- that wasn't going to end up being the kind of the long run and so you've seen us pivot some of our efforts to other areas. And these types of calls are hard, I think we learn how we build on the strength of what the content community is, the greater community is and so again trying to be responsive to what we're seeing from users and creators and where they really want to be and so that would be one example.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. It's a good example. There's a lot of macro uncertainty through these difficult times right now. Can you just, to level set the best you can, can you talk to us about your exposure to Russia and Ukraine and how that's sort of impacting the business?

# **Ruth Porat** {BIO 2536317 <GO>}

Well most important, it is obviously -- it's just devastating to see and it's such a human tragedy. So we are focused intensely on everything we can do to be in support of people in Ukraine and that's everything from how do we get the right information to them, how do we shut down attempted disinformation campaigns. It's intense work 24/7 on Cyber Security and attempts to disrupt. It is the humanitarian relief work through google.org and Googlers broadly, it's looking at how to protects Googlers and their families, extended families both in Ukraine and in Russia. So that is a big part of it. We have stopped advertising within -- within Russia and so there is no doubt an economic cost to this. It's both in revenues and I would say also, if you see the strengthening dollar foreign exchange headwind that that implies, but for us the most important focus area is making sure we're doing what we can in support of people in Ukraine.

# **Brian Nowak** {BIO 16819013 <GO>}

Okay. Want to talk about privacy and regulation a little bit, another recurring topic we cover pretty much every year. Maybe just with all the changes that are going on, both changes that Alphabet is making, changes that other platforms are making, regulatory headwind changes, etc. Just maybe talk to us philosophically about what Alphabet is most focused on in the changes that you've sort of written about in some

of the blog post and what steps are you taking to minimize the friction for advertisers throughout any of these privacy changes you may implement?

## **Ruth Porat** {BIO 2536317 <GO>}

Yes, that's the key part of the question. So I think I've said in this room that one of the important approaches we have is to continue to raise the bar on ourselves on privacy. It is very clear that this is core to all of our users. And we -- it's a responsibility we have to make sure that we continue to use technology as we can to up the bar on privacy and at the same time, we want to make sure that we continue to support an open ad supported ecosystem. And so, getting that right is where our teams have been intensely focused.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. On the Cloud, so with the Cloud, the other area that you talked about as an area of investment and innovation. 2021 we had about high 40%s growth in the Cloud segment, about \$19 billion of revenue and we think GCP is growing even faster than that within the mix. I think you said that a couple of the quarters in the past, so very impressive growth in a competitive Cloud space. As you sort of look back at the last 2 or 3-years, the changes you've made in the Cloud segment, what have sort of been some of the key executional areas that have driven that growth and how do you think about further low hanging fruit to come?

# **Ruth Porat** {BIO 2536317 <GO>}

Well, one of the most important is bringing in Thomas Curry in to run it and have him lay out the vision and bring in the team that he did, and really excited about the announcement we made this morning, that we signed a definitive agreement to acquire Mandiant, an extraordinary player in cyber security, really adding to all that we do in cyber security and is going to enable us to provide this end-to-end solution in this very important area. Again, it goes to our commitment around cyber security, but also all that we're doing in Cloud. So I would say, if you break down his approach and what the team is doing, the investments and the focus, it starts with, let's make sure we've got the depth and breadth within industry verticals, so that we can address the idiosyncratic needs within each industry, whether it's finance versus retail versus healthcare and so they built those out.

Very consistent with that, building out the product engineering team. We have said, I think on the call, the last call that we've introduced more than 2000 new products in 2021 alone, again enriching the overall offering of Cloud. We continue to build out our go-to-market organization. We've continued to build out partnerships for distribution. We've continued to build out what we're doing with our Cloud region, so that we really have this fantastic global infrastructure to support our customers. So it's really that full breadth and then when we step back and say, okay, how do we continue to differentiate. What we do keep hearing is so much public sector private sector, it's our data analytics and Al. It is all that we are able to offer in cyber security and look forward to extending that even further. It is the strength of what we do around cyber security and it's, again, what we're doing with Workspace and the

ability to actually help companies and the public sector as they transform network experience.

## **Brian Nowak** {BIO 16819013 <GO>}

The future looks very good for Cloud too. We look at the backlog, \$51 billion backlog is the latest figures, there is -- there's a lot of hopeful growth to come. When I look at the segment, it still looks like there's about \$3 billion of losses in 2021. Now, if I compare the size of Cloud, Google Cloud to some of your peers, at that point, the losses are larger. The question is, is that a fair comparison? Are there factors that are different from a go-to market, a revenue mix perspective and investment philosophy as to why we should not make that an analogy or how do you think about the profitability of Cloud versus your peers at this point?

## **Ruth Porat** {BIO 2536317 <GO>}

Yes. So I think the way we look at it is, we're obviously not competing against our peers at the scale they were then, we're competing against them at the scale they are now in a market that is accelerating. And our view is, we've said repeatedly, is we continue to think it's early innings and we want to make sure that we continue to invest aggressively in the business so that we have the capability to deliver on this accelerating opportunity. So we don't view it as a guide post, we want to make sure we're investing commensurate with the opportunity, and as I've said repeatedly, we are going to continue to invest aggressively given the opportunity that we see. We of course remain focused on what is that longer-term path to profitability, but to be really clear in the near term, we're continuing to invest across the Board to support Cloud.

# **Brian Nowak** {BIO 16819013 <GO>}

Okay. Let's talk about expenses then. For the total Company in 2020 and 2021 were years -- if it goes that way. Yes, 2020 and 2021 were years really unlike any other, when we think about remote work, teams operating really efficiently at home from around the globe. I know as of April, the teams in the Bay Area are going be coming back a few days a week, so there is a return to work action in motion. But I guess as you sort of you look at learnings over the last 2 years with all the OpEx reductions and sort of what happened, are there any areas where you see structural potential for productivity to be higher, efficiency to be higher, OpEx levels to be lower going forward, just learnings from working -- working remotely?

# **Ruth Porat** {BIO 2536317 <GO>}

So there definitely are advantages to working remotely. And I think we've all experienced it. Our view is that there are advantages to working remotely, but there are also tremendous advantages to be together, which is why we were early to say we think hybrid is the way to go and we continue to believe that. At the highest level in your question, yes, we are focused on efficiencies. We always will be and you see it in some of the comments we make, technical infrastructure or other areas that continues to be a key focus. But we're also looking to invest consistent with what we

believe is important given the opportunities that we see. And you saw that in the fourth quarter, in particular head counts that we added 6500 people in the fourth quarter and I tried to be very clear that we intend to continue to hire aggressively and it's because we see opportunity across the Board.

I've mentioned Cloud already, the opportunity we see there, but it's true in Google Services as well. It's everything that we're seeing with the investments to support better experiences in Search, the application of AI and ads, it's about what we're doing in YouTube and hardware. So across the Board we're seeing opportunities and we want to make sure we're setting ourselves up to continue to really extend that runway by investing where we see it makes sense. So you're going to see it really in OpEx and in CapEx. In CapEx on the call I indicated, we're continuing to build out our technical infrastructure globally, that's primarily servers, but also data centers and then as it relates to office facilities, we've continued to add.

So even though we're hybrid, when you add for example, 6500 in one quarter, people have often said to me, so why did you buy new space as well? Our view is that it's more efficient, it gives us control over the space to do what we want. And so we added in the first quarter in New York, we made an acquisition in London and hopefully you saw in Poland as well earlier this week. So in Q1 about \$4 billion in CapEx around the office facilities and we think again that sets us up really well for the kind of growth that we hope to execute against.

## **Brian Nowak** {BIO 16819013 <GO>}

That's helpful. 6500 employees in the fourth quarter and I think 21,000 for the year in a highly competitive labor market. I'm sometimes asked by investors, how do they even hire that many people in a year? So let me pop open the hood a little bit and help us out, as you're thinking about hiring, as you're thinking about bringing on all these people on onto the platform, is it project based? Is it segment based? Like, what -- how does the actual hiring process work? And what safeguards and checks do you have in place to ensure that as your hiring all these people, you're still getting a good return from them to deliver returns for shareholders?

## **Ruth Porat** {BIO 2536317 <GO>}

So on hiring and overall planning, we start first with what we call, OKR, Objectives and Key Results. We've talked a lot about how committed Google is to really setting out, what are your OKRs (inaudible) and then, really marking to market your progress throughout the year. And frankly discussing it with the entire Company. That starts the capital allocation discussion and then within every product area and function, we look at, so what are the resources that you need, headcount being an important part of it, to deliver against those OKRs. And then throughout the year, we have quarterly financial view that check-in out of which flows are you executing against the metrics that were pre-ordained by the business leaders and the functional leaders as you go throughout the year.

And so, yes, there is rigor around it. And, yes, it's an important question, because we want to make sure we're on boarding great talent, giving people an extraordinary

experience and having them deliver effectively and it's really all parts of it. Part of the hiring and part of your question goes to, we're really pleased, proud to continue to be an incredible a magnet for talent. We had more than 5 million applications last year and so a large part of this is the rigor around, okay, 5 million applications, how do we then leverage the global team and everybody has a role in hiring, because people and compute are two of the most important ingredients to then deliver these magical experiences. So that's a big part of it.

I think that a large part is the work people get to do, but I would also say that some of the return to office decisions that we made. So for example, we're really proud of the fact that we've opened up the number of locations, in particular across the US, so that we can attract more diverse talent. We -- we're really increasing in Atlanta, in Chicago, in New York and DC and so thinking through what is your footprint and we have the luxury of that given the scale that we have to hire in so many different places and still have large cohesive teams. But that's important, giving people agency like 4 weeks work from anywhere, thinking about how do you do hybrid, I think those are additive to continuing to be a great magnet for talent.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. And I remember in the -- in the early days when you came to Alphabet, you talked about really making sure the managers are more accountable to the projects which are and everything else, I'm sure that's part of it as well, where the project leaders who are being given these heads, there is firm mandates and ROI and ensuring that you're clearing ROI goals.

# **Ruth Porat** {BIO 2536317 <GO>}

Well there with -- everybody is looking at what are the metrics and milestones along the way. And it really varies from the earlier stage research to sort of early -- earlier stage to all the way through to more sort of consistent and established that we're trying to make sure that we're running it in the most responsible way.

# **Brian Nowak** {BIO 16819013 <GO>}

Seep cards are in place.

# **Ruth Porat** {BIO 2536317 <GO>}

Seep cards.

# **Brian Nowak** {BIO 16819013 <GO>}

And the capital return point, we saw Alphabet buyback \$50 billion of stock in 2021, that's about \$110 billion since 2018 total. The share count has declined by about 5% even through dilution over that period. Yet so clearly, the cash \$140 billion of cash and marketable securities, we think you're going to generate about \$85 billion to \$100 billion a year going forward. It's a good preamble to just remind us again how

you think philosophically about capital allocation strategy, dividends versus share repurchases and how do you arrive at the size of the buybacks?

## **Ruth Porat** {BIO 2536317 <GO>}

Yes. Carefully I would say. So capital allocation starts with the primary use of capital is organic growth. Everything we've just talked about investing in the business. The second part is the M&A and strategic equity investments. And then we turn to the question of capital allocation. On the strategic equity investments, you've seen the benefit of those in other income and expense over the last couple of years, OI&E, and we've called out that most of those are unrealized, that with market volatility obviously those can go up and those can go down. So that's on OI&E.

More broadly to your question on sizing of program, we do look at this consistently with our Board and we look at size as well as form of capital return. I'm really pleased that we're able to have taken it up as much as we have. I think if you had gone back to that 2018, we were having this conversation and I had said we would be here. You may have questioned it, but we've gone and made this steady march forward. And at this point, we think that share repurchase continues to be the right answer for us, but we do consistently look at it that, as I said, both size and form.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. Let's talk about some of the more -- the emerging pieces. I guess hardware is not really emerging, but it is sort of a question I get last by investors, what's the hardware strategy? So maybe let me sort of ask a three-part around hardware. Biggest learnings from hardware for you, the overall hardware strategy and how does the ambient compute fit into the hardware strategy for where you would like the Android ecosystem to go in the next 3 to 5 years?

# **Ruth Porat** {BIO 2536317 <GO>}

So overall, what we've seen is that when we bring together the best of Al and software and hardware, we can create a really important sort of benchmark and work with the ecosystem more broadly and it's showing kind of what is the art of the possible, whether it's how it's used or photography or other elements of it. And so that was the initial goal and remains the goal, is that we continue to support the broader ecosystem and we have the opportunity to, with our product, demonstrate some of the capabilities. It was I think really exciting for us to finally have the system on a chip. This past we picked the Pixel 6, and the implications of that and sort of the functionality of the phone, that was an important learning and continuing to invest there as a result.

And then to your question about ambient computing, the whole notion is to be as useful and helpful to you wherever you may happen to be and so adding Fitbit as an example to the family, it's like whether you're with your phone or with a watch or in the car, it's this notion of constantly being able to be as responsive as needed. And so that's the way we're continuing and the team is continuing to work against the program.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. Lets talk about Waymo, autonomous driving, there is that this is sort of been a, I would say sort of a snails pace relative to what we thought from an autonomous perspective, it's a very difficult engineering challenge, lot of regulatory challenges, etc. You've -- you now have Waymo One rider only product out for a little over a year now. So I guess the question is, as you sort of look at progress you've made with Waymo and Waymo One, where have you come the farthest and what are sort of the biggest areas of incremental investment you need to make on Waymo to sort of get autonomous driving to where you want it to be?

## **Ruth Porat** {BIO 2536317 <GO>}

So, it is tough engineering challenge and when you look at the more than 1 million lives blocked on the road, that's what motivated this. We've talked about that here before and continues to do so and we're making sure that we're doing this in a really safe way. So we, at this point, we've had 10s of thousands of rides. We are starting to charge here in San Francisco, which is a step in the right direction. We're testing in New York, we're testing in other cities so that we can see what happens in different climates and different topography and so continuing to make progress with safety continuing to be kind of the number 1, 2 and 3 priority. We are also building out Waymo Via which is with around logistics and we have some partnerships there for example with UPS. And so it's -- we're continuing to iterate on the front.

# **Brian Nowak** {BIO 16819013 <GO>}

Okay. Emerging markets have been a pretty consistent focus over the years, I want to ask you about India and Africa, you have a lot of initiatives in those markets. YouTube, Android, hardware, payments, cloud, investments with Reliance, the entrepreneur fund. I guess as you and the executive team sort of envision where you would like India and Africa to go, how should we think about investments there and how do you think about those markets developing maybe differently than some of the more developed markets like the US and Europe?

# **Ruth Porat** {BIO 2536317 <GO>}

Yes. All important, it goes back to the -- my first comment which is, we invest for long-term growth and we short hand call this the NBU markets, the Next Billion Users. And so have been very focused on ensuring that we're investing for the Next Billion Users and your point, how is this different, yes it's different. In many markets, younger, mobile first and so it's poised before tax. So there are a lot of the elements of it that are different. And so what we did in India is, we created a \$10 billion India Digitization Fund and the notion was really to invest in that ecosystem to build it out and it's about confidence and where India actually can go and as you said, with Reliance, with Airtel, with Jio Reliance, we've made some investments and are looking to develop products that is specific to the market and potentially more broadly in NBU.

In Africa, we announced, I think it was late last year, a \$1 billion commitment to invest across Africa and very similarly, it's very exciting when you look at a lot of the innovation that's coming out of there. We have some AI engineers there as well, payments that some of the innovation that really points to the rest of the world. So our view is, we need to be where the Next Billion Users are and as part of our mission, organize the world's information and make it accessible and useful for everyone. It is a core part of it. And as you're thinking long term, of course it is a key initiative and I've sized that for you and to give a little dimension.

## **Brian Nowak** {BIO 16819013 <GO>}

Okay. I wanted to close, I look at -- look over the years at the questions, a year ago, I don't think we externally had any idea that the Retail Search category have this type of really acceleration even through laws of large numbers. YouTube surprised us for a good part of the year. As you sit here now, what sort of excites you most about 2022, that one year from now, we're going to be sitting here and saying, wow, this aspect of Alphabet really surprised everyone and where it's not paying enough attention to at this point?

# **Ruth Porat** {BIO 2536317 <GO>}

Well, I think I've hit on sort of the key areas that we're focused on. Al is one of those opportunities where it just continues to build on itself, and as we have an extraordinary team you just -- as they continue to explore, it continues to go deeper and whether we're talking about MOMs and that's what does that mean for Search or whether you look at some of the things like performance MAX and ads or smart bidding, across the Board, the opportunity in cloud to work with enterprise. Every enterprise needs to think about how do they interact with their customers, how do they think about efficiency, how do they think about risk analytics. And so this will continue to I think surprise or guide the way. So, excited about -- excited about that.

# **Brian Nowak** {BIO 16819013 <GO>}

Yes. Cant wait to watch it. Well we're talking about over the course of the year.

**Ruth Porat** {BIO 2536317 <GO>}

Great.

**Brian Nowak** {BIO 16819013 <GO>}

Thank you very much.

**Ruth Porat** {BIO 2536317 <GO>}

Thank you so much.

**Brian Nowak** {BIO 16819013 <GO>}

Thanks.

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