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Thomas Kurian, CEO of Google Cloud at the Goldman Sachs Communacopia + Technology Conference on September 13, 2022

Eric Sheridan, Goldman Sachs: Hi, everyone. So for those who don't know me, my name is Eric Sheridan. I'm Goldman Sachs' U.S. Internet Equity Research Analyst.

It's my pleasure to host Thomas Kurian from Google Cloud as part of my Internet coverage, as part of the company Alphabet. I am going to read a Safe Harbor quickly and then do a quick bio and intro of Thomas. And then he's going to join me on stage for a presentation, followed by a fireside chat.

So some of the statements that Mr. Kurian may make today could be considered forward-looking. These statements involve a number of risks and uncertainties that could cause actual results to differ materially. Any forward-looking statements that Mr. Kurian makes are based on assumptions as of today, and Alphabet undertakes no obligation to update them. Please refer to Alphabet's most recent Form 10-K for discussion of the risk factors that may affect its results.

Thomas Kurian became Google Cloud's CEO in November of 2018. He has deep experience in enterprise software. Prior to Google Cloud, he spent 22 years at Oracle, where most recently he was President of Product Development. Thomas is going to come up and do his presentation. Thomas, welcome to the Goldman Sachs Communacopia & Tech conference.

Thomas Kurian, CEO, Google Cloud: Thank you. Thank you, Eric.

Thank you all for giving us this opportunity to share with you the trends we see in cloud computing, Google's strategy in the cloud market, why customers are choosing to adopt our cloud and how we're bringing these solutions to market.

Our mission and strategy at Google has been to accelerate the ability for every organization to digitally transform their business by offering them a unified cloud-computing platform that they can use to build on as the technology foundation for transformation.

Over the past three years, we've seen four important trends in cloud computing. First, the market is in its very early stages still, and there's lots of growth, and there's lots of growth for many vendors.

Second, the primary drivers of cloud computing used to be the migration of workloads onto elastic computer storage. While that continues to be important, new markets are opening, driven by growth in data, artificial intelligence, machine learning, cybersecurity and others.

Third, some of these drivers, measured by independent analysts in many different surveys, are buying factors in segments of technology and products where Google has real strength.

Finally, if you go back to April 2019, when we first, at our conference, introduced the notion of multicloud, very few customers were looking at using technology from multiple cloud vendors. Today, just three years later, the vast majority -- no matter which survey you look at -- look at using technology from multiple cloud providers and the notion of multicloud is quite widely adopted.

Recognizing these trends, we focus our products in four product lines: Our data cloud, which provides organizations a data warehouse, a data lake, machine learning tools in one integrated data platform to take their data and understand it to get intelligence.

Our infrastructure cloud consisting of our public regions. Our hybrid cloud or private cloud. And our edge cloud, allowing people to modernize their IT landscape and build cloud-native applications.

Third, as people have shifted the nature of work to hybrid work, our communication and collaboration tools, Google Workspace, has seen significant growth and adoption.

And, lastly, recognizing the growing threats from cybersecurity, we build and offer customers an integrated set of tools to protect their data, applications and systems from cyber threats.

We offer this through 34 cloud regions that are live, nine additional that we've announced, 103 availability zones, connected globally by 22 undersea cables and a large global network serving customers in over 200 countries around the world. Our footprint continues to expand in response to customer demand for our products and services in many different parts of the world.

Now, let's look at our major products and why customers choose us, starting with where we lead the industry in data. We offer four unique capabilities that attract customers to our data cloud. First, for customers like Comcast who want to combine voice records from their call center, images of their bills, along with analysis of which customers are satisfied and which customers are having issues, we're the only ones who allow people to mix structured and unstructured data analysis.

Secondly, customers don't want to have partial data solutions. You know, they want a single data cloud that allows them to run data warehouses, data lakes and machine learning tools. So all the people in the organization can collaborate together in understanding data. We do that for Walmart. We do that for Home Depot. We do that for many other companies.

Third, the vast majority of our customers combine data in our data cloud from multiple clouds, from other cloud providers: Amazon, Microsoft, our Cloud, as well as on-premise data sources. Opening up our addressable market for our data cloud to all customers. An example being Unilever, which runs their supply chain's sustainability analysis on our cloud.

Lastly, we made it trivial for customers to run large-scale systems, exabytes-plus of data every day, with no need to manage any infrastructure. They simply load their data and run their queries and they don't have to administer anything.

Second, in the infrastructure area, we lead the market in four different ways. First, if you're building cloud-native workloads -- Flipkart, the leading eCommerce company in India; Mizuho Bank, one of the largest financial services institutions in Japan, they wanted the best performance, scale and cost. And our innovations in hardware and microprocessors allow us to offer that.

Second, workloads are shifting in the cloud, not just to run traditional CPUs but increasingly new types of algorithms: AI algorithms, simulation, high-performance compute. And we have unique hardware and microprocessor technology that provides customers like AMD, Broadcom in the simulation space, and almost all of the self-driving car companies, for example, that need large-scale AI models, the ability to run those workflows in our cloud.

Cloud computing continues to move to the edge. It's driven by demand from telecommunications companies like British Telecom, Bell Canada, T-Mobile, who integrate their network with our edge technology, and retailers, gaming companies like Unity, that use our edge because it can work with any cloud backend. It can work with Azure. It can work with Amazon. It can work with Google. It can work with Alibaba, so they can deploy a global footprint across the world.

We've all experienced the pandemic. We're all trying to understand what it means in the nature of work. People in many companies and industries do not want to go back to the office. When the office is no longer the physical space for work, there needs to be a digital space through which people get their work done. We call that Google Workspace.

Airbus, a large company, over 100,000 employees in over 100 countries around the world, dealing with highly confidential information – uses our cloud and Google Workspace to bring all of their people together, because it makes it easy for them to deploy across all these countries as a cloud-native solution. It allows their users to use mobile devices to understand information, and it keeps their data secure at all times.

Second, digital workers are no longer people in offices. They include retail store workers at Carrefour. They include nurses at hospitals like Ascension Health. They want mobile devices and secure communication from these devices. We provide them that capability.

We provide unified communications and unified collaboration. Just two years ago, 6 million customers paid to use Google Workspace, 6 million individual companies. In two years, that number has grown to 8 million because of the technology and the ease with which they can operate.

The threats from cyber attacks continue to grow. They continue to proliferate.

We are pleased today that Mandiant, the leading cyber-intelligence security company and about 2,500 approximate employees are now part of Google.

Our vision behind the acquisition of Mandiant was very simple. When we talked to CIOs and CISOs and CEOs, every cyber attack has been a black-swan event. The day before the attack, the organization thought it was secure. The day after the attack, they realized they were not.

What we are trying to do with cybersecurity is to simplify and automate the ability to understand the nature of the threat that Mandiant gives us through their incident response and threat intelligence; to analyze if you as a company have been compromised by that threat that we get using our Chronicle platform; to automate the remediation of it; and then to validate that you're secure.

So the acquisition of Mandiant allows us to offer companies a platform for security operations that combine all of these capabilities and automates the way they get cybersecurity.

We also protect millions of websites from fraud every day. We've introduced new capability and response for the Log4j vulnerability around signed, secure, open source libraries, because we have expertise in doing that for many years.

Lastly, Google has invested for years in artificial intelligence and machine learning. Not only do these solutions power our consumer properties, these are also helping enterprises in many different places. Our hardware and software combination is being used by organizations like Ford Motor Company, Johns Hopkins and others to run complex, large-scale algorithms.

Our software, our AI software, that does advanced speech, audio, video, image processing is being used by many companies. An example is Vonage that's using it to improve the way that they understand speech.

Our software platforms allow every organization – XPO Logistics as an example. ENGIE in the energy space, we empower their data scientists to use the same tools that Google's engineers use every day to build AI and machine learning models, improving their productivity.

All of these solutions have allowed us to show strong product momentum. In the data cloud, we've seen 3.5 times growth in the volume of data analyzed and 5x growth in machine learning model development in just the last 12 months.

If you look at our infrastructure cloud, every day millions of developers build large-scale clusters. Just to give you an example, in a single month, we typically see on the order of 2 billion clusters based on Kubernetes, a standard that lots of developers use, which is a growth over 75% year-over-year. It also drives a 2.5 times increase in network traffic on our network.

Google Workspace is the world's most popular communication collaboration tool, used by over 3 billion users monthly, 8 million paying companies. And 5,300 [sic] partners deliver solutions on top of Google Workspace that users use every day.

From a cybersecurity point of view, we've identified vulnerabilities in 40,000 open-source libraries, protected just recently the largest distributed denial-of-service attack in the world. And we secure over 6 million websites from fraud. All of which represent opportunities for us in growing our business with these customers.

Many of the leading companies around the world in every industry and geography today are customers of ours. And when you look at the largest companies in the world, just three years

ago, we virtually were in none of these companies.

Today, whether it's in telecommunications, retail, media, technology, almost all the leading companies in the world run big parts of their business, if not all of their business, on our cloud.

We have dedicated our work to also bring a large partner ecosystem with us. We look at the partner ecosystem through four lenses: System integrators who can expand and accelerate how quickly customers can migrate their workloads to the cloud; independent software vendors that broaden our addressable markets; technology partners that complement and complete our solutions; and finally, distributors who extend our reach.

We're very proud that from virtually zero partners four years ago, we have 92,000 partners for Google Cloud today. It reflects not just our momentum but the fact that we're also bringing a lot of business to partners. Examples, all 12 of the top 12 leading visionaries in analytics and business intelligence run their business using our data cloud.

Enterprise security. Ten of the top ten publicly traded enterprise security vendors run on Google Cloud, and we take them to market jointly with us. Similarly, all five of the leading global system integrators, recognizing the demand that customers have for products and services, have built dedicated cloud practices for Google.

The differentiation we have in our products, our broad go-to-market reach is leading to strength in customer adoption. On average, a company uses 13 different products from Google Cloud, showing the deep product relationships we have with these customers. In the first half of this year alone, we delivered 1,300 new products and features, a 22% [sic] increase from a year ago.

On the partner side, as I said, 92,000 partners do business with us. It's a three-time – along with – we committed three years ago, four years ago, that we would expand our sales organization by more than three times. And we have done that through disciplined, focused expansion of our sales and go-to-market organization.

Are we winning only in the largest customers? No, even in the new emerging companies, 70% of the top 100 unicorns run on Google Cloud. And our partners are making a lot of business with us. The number of deals we have sold along with ISVs, independent software vendors, has grown 130%. And through our Marketplace, many customers use our technology and partner solutions together.

Finally, this momentum – has led to growth in our financial results. You've seen our growth steadily over many quarters. And not only that, we have strong comparisons to market growth as a whole.

So in closing, the cloud market is in its very early stages. We have highly differentiated products in multiple product lines. We're bringing that to market through a large, focused, scaled go-to-market organization. We also work with a broad network of partners who are seeing large expansions of their business with us. And the combination has led us to show not only customer adoption and traction but also strong financial momentum.

Thank you.

Eric Sheridan, Goldman Sachs: Thank you, Thomas. Thanks for all that – interesting update on both the scale and the momentum that's building in Google Cloud. Really appreciate it.

Would love to start with taking a step back. A lot has evolved over the last few years at both the industry level and in the cloud space and within Google Cloud. Can you give us your world view of where we sit in cloud adoption, usage, and how you see Google Cloud's position within that framework?

Thomas Kurian, CEO, Google Cloud: Yeah, great question. Thank you, Eric.

You know, if you look at the last three years, cloud adoption has changed in a variety of ways. People are looking – three years ago, if you talked to large customers, they would say, cybersecurity – probably not a place I would use cloud for. Data – I'm not sure I would use a cloud for it.

So we're seeing – the major trends is new segments or product lines, opportunities are opening up for us. Many customers use us along with other clouds. Multicloud is now – almost everybody looks at it. It opens up a huge market for us.

Third, the speed with which these projects are getting done, increasingly many companies are adopting a cloud-first rather than a cloud-also approach. And we've invested heavily in both our products and the ecosystem to bring these solutions to customers. So we're seeing significant interest from partners who want to build solutions on top of our cloud to take it to market. Just this morning as an example, we announced a variety of different partnerships in the data area. And these are all examples of things that we're seeing increasingly getting traction.

Eric Sheridan, Goldman Sachs: Given the macro environment remains uncertain – and we haven't experienced a prolonged recession or downturn since cloud computing has scaled as an industry, aside from what we went through from COVID – how do you think about potential outcomes for public cloud spend resiliency within broader enterprise IT budgets against that potential landscape?

Thomas Kurian, CEO, Google Cloud: I'm not going to comment on macro. I think here in the audience are people who are far more sophisticated than me on when the macro environment changes.

But the long-term trends that are driving cloud adoption continue to play an extraordinary role during the macro environment, right? So, for instance, much of cloud computing is because it provides a more cost-effective infrastructure rather than traditional models of operation.

We offer, for example, managed services, managed databases, managed data warehouse, managed analytic tools. These give people the ability to shift their people from managing machines to doing projects. So it also allows IT organizations that may be people-constrained to actually get projects done because they're not doing things like managing machines and

devices.

Third thing is, there are lots of capabilities that we offer that you couldn't get in any other form or fashion. So an example is we've helped a lot of organizations managing, demand forecasting, supply-chain visibility. And it's because of the predictive capability of our machine learning tools that let them do that.

So it's not that we're offering a substitute for something that people could get in some other way, it's we're offering them new capability that is really important to them. So all these factors in the long term -- you know, we're always investing and managing for the long term. I think they all play well to what the long-term direction we see with adoption of these technologies.

Eric Sheridan, Goldman Sachs: So sticking with that long-term direction for a minute, maybe bring it back to investments. You laid out a lot of long-term opportunities. How do you as an organization think about aligning capital and investments against the opportunities you see? And how does it feed back into thinking about long-term profitability and earning a return on those investments?

Thomas Kurian, CEO, Google Cloud: Good question. We look at investments in primarily three areas, and they each have a different time horizon.

So capital investments in data centers, global network, machines, et cetera, we're typically looking at a long-term horizon, typically on the order of eight to ten years, because investing in building a large-scale region in a country is something you're doing in response to large addressable market. And typically you're making that investment over an eight to ten-year horizon.

Second, a go-to-market organization. Earlier when we built a go-to-market organization, we don't have a lot of customers, right, when we started. So we were funding that go-to-market organization to acquire customers.

As we've seen strong adoption of our technology in customers, the number of salespeople who are working with existing revenue-generating clients, as opposed to all working on greenfield accounts, changes the efficiency of our sales force. So that's the second piece.

Products. We've matured our products over the last three years. We've become a real player. And investments we make in adding products or adding features to the product are always in response to either customer segment, opening up a new addressable market like compliance needs. And so even there, as we've matured the product portfolio, we're building incremental capability. But the baseline lifts us a lot from a point of view of investment efficiency.

So we're very confident. Obviously, we work very closely with our leadership team. We're very proud of them. And we wouldn't be investing if we didn't have absolute clarity with Ruth, Sundar and the rest of our leadership team on a path to profitability.

Eric Sheridan, Goldman Sachs: Great, understood. You recently announced your first region in Mexico. How should we think about your infrastructure footprint scaling over time? How much

of this is driven by growth you see ahead versus the need to localization? And how much is localization being driven by regulatory pressure around things like data privacy or performance for end users?

Thomas Kurian, CEO, Google Cloud: A lot of our decisions on investments in cloud regions are also based – when we invest in a cloud region, we're looking at multiple factors.

One is the total addressable market in the local market. Second is the demand for multinational companies that want to serve that local market, because we have a large number of global companies in our customer base and many of them when we say – “should we consider this market?” – tell us – “here's an example of a market where we would really like you to be present in.”

There are technology considerations, for example, latency. And then there are regulatory considerations where, for example, a government may prefer or strongly require that data remains within the boundaries of that country.

So depending on all those parameters, we make decisions. But those decisions are also guided by investments in our go-to-market and other functions so that as we build a cloud region, we also know how to monetize that.

Eric Sheridan, Goldman Sachs: And sticking with that theme of go to market and you talked a little bit earlier about sales force productivity and scaling the sales force, Google Cloud has spent a lot of time optimizing go-to-market strategy and aligning the organization against your broader vision since you took over leadership.

Can you talk about what that looks like today? And how did you manage -- or how do you manage or think about sales force productivity and utilizing partners to go to market versus maybe go-to-market that's owned organically?

Thomas Kurian, CEO, Google Cloud: So we've had a very, very disciplined, focused growth strategy for our go-to-market organization. They're taking a consumer company and building a real enterprise business. Almost no one else has done it.

So how do we do that? You start with focusing on certain countries and markets. And every year, we've added incrementally; but we wanted to get, first, depth in certain countries and markets rather than spread wide. That's step one.

The second is we've specialized. We've specialized in three different ways. We've specialized by product category, because, for example, if you look at who's buying cybersecurity tools, the buyer is typically the chief information security officer, not necessarily the CIO.

If you look at people buying our analytics and data platform, sometimes it's in the IT department; but in many cases, for example, the case study that was done in the Wall Street Journal on the work we did with UPS, was actually the head of logistics.

So the second thing we did was specialize our sales force. We've also specialized by industry.

Recently, for example, we announced the creation of a public sector subsidiary focused on selling to government agencies. And so we specialize by industry because different industries have unique needs.

And then lastly, we sell to both traditional technology – traditional IT organizations and enterprises as well as companies that are born in the cloud. Some people call them digital natives. And the way you engage with them are very different.

So we've done all this work. We've built a focused team focused on partners. Partners complement us. They help us accelerate growth. They help deploy our solutions. We've been super clear where we play and where our partners play, and we've had great success growing the ecosystem of partners around us. And, frankly, many partners find us one of the most easy companies to work with. And they've grown substantial businesses with us.

Eric Sheridan, Goldman Sachs: Great, okay. Google's long been seen as having differentiated products when you think about data analytics or AI or machine learning. How do you see the demand for these types of products evolving? What do you see as some of the primary drivers of growth in that part of the market?

Thomas Kurian, CEO, Google Cloud: The important things that we see are when we – when we got into data, we started – you know, there's lots of individual pieces of technology that people talk about. They talk about data lakes. They talk about data warehouses. They talk about lake houses. They talk about ML tools. If you look at the average company, they just want a platform with which they can load the data and they can run all these different kinds of analyses.

Because some people who are data scientists say, "I want to build a model." Other people who are business analysts don't have the expertise to write a model. They want to query the data. Other people want to run calculations in different kind of programming languages.

So the first thing we built was, one, data cloud supporting all these different flavors.

The second thing we said is, if you really want to do data, you've got to do it across clouds, because nobody wants to say, my data happens to be in this cloud, therefore, I have to run analysis there. And so we bridge all the clouds. And the vast, vast majority of our customers are using from multiple clouds.

The third thing we see is we introduced a capability for organizations to share data with other people. It's super interesting for retailers and their consumer-packaged goods companies, for example, sharing demand forecasts with fulfillment and supply chain. Really transforming how efficiently supply chains can run because now you can collaborate across the boundaries of an organization.

All of these have shifted data from being a topic that IT organizations focus on, now to the head of merchandising, the head of supply chain, the head of logistics. And we've trained our people to sell there.

Eric Sheridan, Goldman Sachs: Okay. You talked a little bit in your presentation about the Mandiant acquisition. I wanted to turn to security for a minute.

Can you talk about your own focus within the organization on security? How you think it differentiates Google Cloud? Maybe give us some examples of some of the risks or threats you think that organizations are facing. And then bring it back to your explanation for why Mandiant was the right acquisition for you guys.

Thomas Kurian, CEO, Google Cloud: We look at our security portfolio with two simple lenses. The first is, if you are running your workload as a company on our cloud, how do we ensure that you are safe? We do that by simplifying security for people.

Today when people run their systems and they have all these breaches happening, it's not because they haven't invested in tools. It's the fact that they have so many tools they don't understand how to administer the environment securely.

So what we've done is really provide people three capabilities. One is simplifying architecturally how they run the workloads in our cloud. Second, providing them the ability to measure if they're running in an assured configuration – we call that an assured workload – where we take responsibility jointly with them to assure the security of it.

And the third is the proof of it, is that if you can manage and measure your security posture, you should be able to insure yourself with it. And so we also offer cyber insurance with insurance companies, because now a customer can say, I'm running on Google. I'm secure. Here's the proof of it. And they can re-insure [sic] themselves. So, that's one piece.

The second piece, the variety and flavor of cyber threats continues to accelerate. The most important factor if you are a cyber attacker is, how long from the first time I'm detected til the last company that is affected is locking me out. And if that window is a long time, as it is today, they will keep finding new ways to come in.

So the rationale behind Mandiant was super simple: How do you get the world's best incident response team that is at the forefront of almost every attack that can detect what are the new flavors of vulnerability coming in and what are the new flavor of attacks coming in that gives us the best threat intelligence feed in the world and the earliest response capability?

That then is fed into our platform where we're combining, obviously Google's strengths in machine learning and AI, to detect the needle in the haystack. Are you, have you been compromised? To integrate that into a workflow that allows you to remediate.

And then most importantly, if you ask the average CISO, can you guarantee that you have actually ejected the attacker and you know that you are no longer compromised? Almost nobody can tell you that. So the last piece is validating that you're, in fact, secure.

And through this, we believe fundamentally that you can take cybersecurity from a lot of little bolt-on products to a more secure platform that people can use to guarantee their enterprise-wide security posture.

Eric Sheridan, Goldman Sachs: Got it. I want to come back to Workspace. I think that resonates with everyone in their personal and professional lives – touch some elements of Google Workspace and the application suite.

What are you hearing from clients about the future of hybrid work, the role Workspace may play in workflows and how you're positioning Google Cloud against what you're hearing from customers?

Thomas Kurian, CEO, Google Cloud: You know, when hybrid work happened, we had lots of organizations – media companies that were moving their recording studios, people who were issuing devices to their mobile workforce – for example, pilots in airlines, nursing staff, hotel companies that all of a sudden had guests that needed access but with different permissions.

The biggest thing that we saw – was enormously interesting – is, if hybrid work means you can work from anywhere and hybrid work means you want to access from anywhere and if it means you need to work securely from anywhere, you need a tool and a platform that's super easy to use. A platform that everybody in the world is comfortable using. A platform that's super easy to provision. A platform that's super easy to administer.

And the cost of some of these – you particularly see in Asia, for example, where there's a large, large professional workforce, almost all of them use mobile as their primary platform because they don't use laptops and desktops as much. And we've got large, large clients there, hundreds of thousands of employees, overnight that needed to be provisioned and given access to these systems. And our platform makes it trivial to do that.

Eric Sheridan: Okay. I know we're coming up on time and I want to squeeze one more in, because I want to take the opportunity to ask you about secular growth for the long term.

You obviously talk to a lot of enterprise and SMB customers. Maybe just leave us with your perspective on why are people shifting workloads into the public cloud and bring it back to how you see Google Cloud specifically positioned against that landscape.

Thomas Kurian, CEO, Google Cloud: In the long term, any technology shift is always driven by business priority. And that business priority is digitization. Every company we talk to says: What I learned from the pandemic that I'm taking forward with me is, can I drive a digital customer interface? If I'm a bank and people are not going to come to my branch, how do I reach my customer online and offer them capability? And so the long-term trend is basically driven by that.

Small and medium enterprises fall in two different flavors. There are those that don't have – they're not a technology company and so they want more end-user shrink-wrapped product. We offer that.

And then there are digital companies, the startups as they are called, where they are basically a technology company and they want us to give them the technology that powers Google and all our services, they want to use the same. And we offer that through our cloud.

Large enterprises, obviously, is an ecosystem play because they need their IT organization. Typically they have system integrators. Sometimes they have outsourced managed service providers that they work with. So bringing that ecosystem along has helped us, also, get into the large enterprise space.

But we've been very focused these last three years. Obviously, we're very pleased with the results we've shown and demonstrated. And we remain very confident about our future as a real player in cloud computing.

Eric Sheridan, Goldman Sachs: Great. Well, first, Thomas, thank you for making yourself available. I really enjoyed the conversation.

Second, please join me in thanking Thomas Kurian from Google Cloud for being part of our conference this year.