

**Telco in 20 | Episode 42**  
**Talking Telco with Google Cloud**  
**Released May 31, 2022**

DR: I'm Danielle Royston, and this is Telco in 20. I started this podcast in 2020 to talk about how telco needed to move to the public cloud. I decided to call it Telco in 20 because I wanted the industry to get a grip on where it needed to be in 20 years. And lo and behold, the conversation has totally changed. I mean, is it even newsworthy anymore if a telco signs a strategic deal with a hyperscaler? Everyone is doing it. That ship has sailed. Was I responsible for this shift? I don't know. Am I going to take credit for it? Absolutely.

DR: But regardless, we're at an inflection point in the industry. The move is happening and I am super psyched. And for 2022, Telco in 20 is pivoting to talk about how telcos are moving to the cloud. Like, what workloads are you going to move first? How fast can you make it happen? And how do you course correct when it's not going the way you planned?

DR: So I'm going to revive an old Telco in 20 series, Conversations with the BFCs, and so it's time to check in with Google Cloud. Today on the podcast, we're talking to Amol Phadke from Google Cloud about what they're doing in the telco space and why Telco should pick them. So let's take 20. Amol Phadke is managing director and general manager for the global telecom industry at Google Cloud. Hi, Amol. Welcome to Telco in 20.

Amol: Hey, DR, nice to meet you again.

DR: Yeah, no, it's totally great to catch up with you. So just to remind our audience a while ago, I kicked off a series on the podcast and had a guest from each of the hyperscalers come on and talk about their public cloud and what they're doing with telco. And so I'm super excited to catch up with you today and see what's been going on with Google Cloud. I think to start, you guys recently have made some announcements with Vodafone. And when I look back at the history of that relationship, I think it started in '19 with Neuron. And then I think most recently you announced that you guys are going to create a pan-European cloud. And so I would love to learn more about stuff that you're doing with this marquee customer. Tell us a little bit about how that's been going and how that's evolved over the last three years or so.

Amol: Fantastic question, DR. So let me give you a little bit of insight on what we are doing with Vodafone. Vodafone has been an exceptionally strategic partner for us and has resulted in some great business outcomes for Vodafone. So when it started back in November of 2019, essentially, as you said, it started off with the Neuron program, which is a big data analytics platform that allows Vodafone to utilize real time data analytics in order to get on unique insights into how their business works. And that insights essentially come all the way from customer services to network planning and optimization and even at the customer layer. So very, very strong partnership that we built.

Amol: And we always viewed that as a foundation on which to build bigger and better capabilities working with them. So it started with Neuron. And then essentially what it does is it uses a bunch of Google Cloud capabilities, such as Dataflow, Dataproc, Data Fusion, BigQuery, so on and so forth. And then it also brings together multiple data sources from Vodafone phone to create this analytics platform on which you could then drive significant insights to help you run a better business.

DR: You know what's really interesting the way I imagine this was, it was more like an evolution.

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Amol: So it was sort of the idea that, hey, let's nurture this platform, let's build something unique and then let's build upon that going forward. So it was an evolution, as you said. Now last year we took the next step in that journey, which is essentially we built a new concept to the industry really. And Vodafone pioneered this by creating this platform called Nucleus with an engine called Dynamo inside that Nucleus platform.

Amol: We said, let us build a new integrated data platform that is capable of processing terabytes of data. Maybe 50 terabytes of data per day. And these are really industry first, to build a platform that can process that amount of data, built in house, DR. Up to 1,000 employees of both companies located in Spain, UK, US collaborated on this project, building this platform. It's a global integrated data platform.

Amol: What's unique about it, as I said, is the data sources could be anywhere inside Vodafone's deployed models. It is a hybrid cloud in the sense that the data sits in disparate places and sources. And it gets moved seamlessly into cloud at the rates that I described before. And essentially you take all of the data together and then drive those insights. So it was really an industry first from that perspective.

DR: Yeah. No, I think it's one of the most exciting cloud projects and it's been really cool to watch that evolution. I first heard about it with Simon Harris's talk at Google Cloud Next in London. And then certainly during the pandemic, there were like these little strategic partnership here. Another project there. What I think that's been so exciting about this project and watching Google Cloud work with Vodafone is that it is that little snowball. I mean, it's a heavy lift to get all your analytics into the public cloud, but you can build on it, like you said.

Amol: Exactly. And to your point, the creation of this single integrated platform already identified more than 700 use cases DR, across products, services, customer service, network, and so on and so forth. Then came the step that we announced this month, which is now that we are generating these use cases, which was always what we wanted to do, how can we build applications on top that can leverage those use cases to drive unique experiences?

DR: For sure. Well, you've got to connect it back to the system of action.

Amol: Exactly.

DR: I think a lot of telcos, first of all, they didn't have the insights because they didn't have the capability or the processing power to get them in the first place. But then once you have them, you got to action them. You need to deliver the insight at the point of customer support of what do we need to do for this customer, or when there's an outage, the analytics are saying, okay, here are the customers that are impacted and here's what you should do to rectify the situation. And so I 100% agree and I think you absolutely need the processing power of the public cloud. You can't build it in a private cloud or on premise you need the scale of Google. I love this project. It's amazing.

Amol: Yes. I mean that's why the most recent announcement is essentially us partnering with Cardinality to build a very specific network performance focused use case among the hundreds that I described before. And essentially this is just the first off menu, because now we are going

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to create a partnership with Cardinality that helps Vodafone use the data to essentially monitor, manage, enhance its entire pan-European network.

DR: It's going to be so awesome.

Amol: And the processing and the analyzing of billions of events that are happening would give you the sense of better network deployment, better network planning, better network performance, and ultimately drive much better customer experience.

DR: From the subscriber, a better subscriber experience.

Amol: That's exactly right.

DR: The ability for the telco to really react. I don't know if it's like real time, real time, but so much more quickly than they do today.

Amol: That's exactly right.

DR: And I think that's what really drives business is that subscriber carrier relationship that we don't really talk about or focus on. So I am pumped, I use it as an example all the time because I think it's so great what you guys are doing with Vodafone. I think it's super cool.

Amol: We are grateful to Vodafone for trusting us and for the partnership with us.

DR: They're great. And so moving on, we always watch what you guys are doing with your big annual conference, Google Cloud Next. And at last year's event, you guys announced Google Distributed Cloud, which I think kind of builds Anthos. I mean obviously other guys have offerings as well. I think AWS has a similar one. Outpost Azure, I think is Azure Stack. Talk to me about how this works and how you guys kind of position it in the market and when you recommend to use this product.

Amol: Yeah. So DR when we were conceptualizing this product, as you said, we were thinking of how could we use assets such as Anthos, which essentially let you have multiple deployments of your workloads across hybrid clouds, and have the same consistent management experience. So as we started evolving that, we quickly realized that our customers wanted all the goodness of cloud, but much closer to where they are.

Amol: Distributed cloud and the Google distributed cloud portfolio that we announced is really a managed product that has hardware, that has software, that has services wrapped into it. And it brings the same goodness of cloud and our planet scale infrastructure with the highest level of performance security and so on-

DR: Closer to home.

Amol: ... closer and really flexible to where you want to be. Because today, DR the jury's still out in the industry on what is the optimal placement of a distributed cloud and which is why-

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DR: Where do you draw the line? What do you move?

Amol: Exactly. And so distributed cloud gives it a flexibility. And in March, actually we were thrilled to announce the general availability of GDC Edge, which is the first incarnation of the distributed cloud platform. And that is a fully managed product, as I said, but you can deploy it on the edge of our own footprint, the Google Cloud's footprint. You could also deploy it inside an operator environment, let's say to power up their cloud native 5G networks, whether it's core or radio. You could also deploy it at the edge of the operator's network, deploy edge workloads. And you could even go further and in some cases deploy it within a customer or an enterprise footprint when you need to run that proximity based sensitive workloads at scale. So that flexibility is what really this product delivers.

DR: Yeah. I recommend this all the time. I mean, even today I was talking to a telco in the Middle East. And in this part of the world, we're seeing a little bit slower movement. We're seeing people decide to build a private cloud and I'm like, don't build a private cloud, instead why don't you use a product like Google Distributed Cloud in your data center because it forces you to get your workloads onto that platform and thinking in a, what I will say, truly cloud native way.

DR: And so that when you decide to expand and move into a Google data center or region, your workload is already ready to move. I mean, it's probably keystrokes to do it. Versus the hassle and the thousands of technical decisions you need to make when building your own private cloud. I'm like, don't do that. Just get one of their installations in your data center, bring it closer to home and get comfortable with the technology. And I bet you'll start to move it into the public cloud.

Amol: And to be honest the GDC Edge platform that we have launched also goes back to the innovation point that I said at the beginning. We want to create this ecosystem-based approach, which means once you have that platform deployed, we have a much bigger, extensive ISV partner ecosystem that you could collaborate with. To actually build applications on the edge. They don't need to on cloud at all times.

DR: Yeah. And especially in telco where that rate of innovation is so much slower. I think that by starting to get comfortable with the Google offerings and the ecosystem, as you said, it's going to speed up that rate of innovation, which I think is so needed. And imagine if you're a telco that starts to learn how to innovate at 10 times the speed of your competitor. I mean, that puts so much market pressure. I would do that in a heartbeat if I were running a carrier.

DR: I'd be like, yeah, let's figure out how to use this technology. Stand on the shoulders of literally one of the best technology companies in the world. It's almost like using Google as an extension of your team. You get to use the Google talent for your own business. I think that's a no brainer.

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Amol: Thank you, DR.

DR: So you guys also just made another announcement called Project Nephio.

Amol: Yes.

DR: I love when you guys put together announcements and PRs, because there was a bunch of quotes from the people that are already onboarded. I think that's a powerful statement that there's buy-in and excitement. And so what is it about that service that's gotten everyone so excited to put their name and associate their company with using that technology.

Amol: Great question again, DR. So as you said, we've actually had unprecedented level of responses on this program.

DR: That's so awesome.

Amol: And now it has got over 50 members already and pretty much every carrier out there, plus a bunch of our network vendor partners, plus a bunch of our network software partners. To your question of what's got them so excited. We've been looking at this whole move of moving to public cloud.

Amol: Now one of the big constraints to moving them rapidly is once your infrastructure and your workload are on cloud, it's a completely new way of managing and operating your systems that you've traditionally operated on prem. Now, when you want to operate them in cloud, you're going to have to do it the way cloud driven systems work. Because if you don't, you're going to not get all the benefits of the overall TCO and overall scale and efficiency and reliability.

Amol:

Which is why we decided to launch Nephio in close collaboration with Linux Foundation. And essentially it is our attempt to work with the industry. And our aim is to deliver career grade, open, Kubernetes based automation, automation templates that can help you drive much faster operations and management and very rapid deployment of cloud infrastructure that ultimately helps time to market. I'll pause there. And you can see I'm very passionate about this.

DR:

Yeah, no, I think that help is absolutely necessary. I think people think, "Okay, great. I moved it. I'm there. I'm done. But wait, where's the savings, where are the benefits?" And I'm like, "Dude, it's just started." And so I think it's great that you guys are thinking about helping those people. Not only obviously move into your cloud, but also start to think in and operate in a very cloud way. And it's not easy. It's hard. So I think this is an awesome project.

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Amol:

Thank you.

DR:

So again, all the clouds have their differences. I have my opinion on what I think Google cloud's great at, but especially when it comes to telco, what's a reason for a telco to select Google cloud is their primary or their top choices in terms of a public cloud provider.

Amol:

This is an existential question in some ways, DR. So from my perspective, let me break this down into a few different points. So number one, over the last two decades, we have built one of the largest privately owned carrier grade networks. That essentially supports applications such as YouTube, Search, Gmail, Maps, apps that everybody loves and uses every day. Now, as we started building those apps, our cloud platform supports those apps, which means our cloud platform in a lot of ways has gone through the same evolution that any carrier would go through. So that's just the first part, which is starting with our network and the infrastructure.

DR: Yeah. I always say planetary scale and battle tested. Those are the words I like to use.

Amol: And why was this matter so much? Our networks are broad and cover the planet, but they don't have the capability and the depth to go in country, in region, in continent. So we have to partner with operators in order to go deeper in order to serve our mutual customers much better. So that's number one.

Amol: Second, as I said before, we were the first to recognize that telecom workloads for a whole host of extremely important reasons, such as privacy, security and so on and so forth are never going to 100% move to cloud. Some of them are going to stay on-prem for legitimate business purposes. So we were the first to recognize a hybrid cloud deployment, which is why all our products are built with the philosophy of seamless operation of workloads, even if they sit on other clouds, including our own. So that's a very key differentiator.

Amol: The third very important part. And I just mentioned that when we discuss Nephio is around our open source contributions and innovation. I mean, you are aware we put Kubernetes out there when Kubernetes was just being tested. Today it's the defacto container management platform. We have now got the next stage of platforms that we want to build together with the open source community. So we are not really building proprietary systems, which is also a big, unique aspect of our cloud portfolio. And then finally, DR, at the end of the day, when we go and talk to our operator partners and clients globally, we also bring our Alphabet capabilities. So our Pixel capabilities, our Chrome capabilities. And when we match those up with cloud, we believe this is a very, very unique proposition.

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DR: I mean, I totally agree. When I think about Google, obviously the Vodafone project, that analytics capability of Google combined with planetary scale. I mean, I was talking to a Google guy a couple years ago. You guys are downloading a copy of the internet every day. It's just like mind boggling when you think about social media and pictures and all the stuff that's happening, it's insane. And I think your point on Alphabet.

DR: You guys own the Android operating system. That is what is installed on mobile phones. I mean, in the United States, we kind of think iPhones are pretty ubiquitous, but in the world it's Android. And I think that brings an understanding that is huge for Google cloud and for telco.

Amol: For sure.

DR: And so just kind of wrapping up like four years ago, I was kind of this lone person screaming, "Hey, telco move to the public cloud." But now it sort of feels like, is it even news if a telco signs a partnership with a public cloud vendor anymore. When you guys think about the next 10 years, do you see telco and public cloud just growing closer and closer? What do you guys talk about and see for telco and public cloud in general?

Amol: Yeah. You are absolutely spot on DR. We've been on an incredible journey over the last three to four years. The whole macro economics, the whole conflicts, the pandemics and so on.

DR: Yeah, for sure.

Amol: When you reflect on all those, you realize how critical the CSP and the service product infrastructure has now become everything we do today, like me doing a podcast with you is enabled through a service product infrastructure somewhere. And I've spent only 20 years in this industry that is 200 year old. But we've gone through so many phases and now we are at a very exciting time because of the importance and the relevance that has gone up several notches because of everything that's happening around the world. So as that happens, cloud and cloud players in general are partnering closer and closer with the CSP industry. We at Google cloud see that happening. The last three years, we built our portfolio we did landmark strategic relationships.

Amol: We've launched several products. We've launched several initiatives in the open source as you've seen. So all of this just shows the momentum and the acceleration happening. I think that's going to continue over the next decade to the point where the value chain will stabilize. What I mean by that DR is right now, there is still a lot of conversations around, "Hey, what's my piece of the pie." And there are so many ecosystem constituents in this overall value chain. To be honest with you, I believe this whole pie is large enough for every constituent in this ecosystem to have substantial value.

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Amol: And I think over the next few years, everybody's going to figure out what's the best value equation for them in that ecosystem. And that will build a very virtuous ecosystem, ultimately for our customers, whether it's on the consumer side or on the business side. Because in the end we are serving them and this partnership is going to start to get closer and closer over time.

DR: Well, I think four or five years ago it was like, will they or won't they? And I think we're past that. And I think when I talk to telcos around the world, everyone agrees, it is a known eventuality. This is going to happen. And now it's just a matter of speed. And so I sort of think we're three years or so. I agree with you, the pandemic really accelerated some of the movement. People realized, I wasn't as digital as I thought. Never thought all of my stores would be closed simultaneously. I never thought we couldn't go to our data centers because people couldn't enter them.

DR: I'd like to think it's me shouting about the public cloud. But it was probably a combination of the three hyperscalers really kind of coming to meet telco, the pandemic and then maybe just a little bit of DR shouting about it. So I like to think that. Well, Amol, this was a great conversation. I really appreciate you coming on the podcast and getting this up to speed with what's going on with Google Cloud. And thanks so much.

Amol: Thank you for having me, DR, absolute pleasure. Hope to connect again very soon. Thank you.

DR: Yeah. Stick around because we're ending each podcast with a Telco in 20 takeaway. I have 20 seconds to tell you something you need to know. We just talked about the analytics platform that Vodafone recently unveiled with Google. The system gathers network performance data across their 11 markets and churns out insights that Vodafone can use to deliver a better mobile experience to subscribers.

DR: And Vodafone is already seeing 70% lower network incidents. Like Amol said, they are starting to use a system to drive insights into their systems of action. As acting CEO to Totogi, let me say that game recognizes game. I'm super excited about what Vodafone is doing and it's proof that Totogi is on the right track. With our charging engine you can jump to the front of the line and use our engine and machine learning models to get insights on your subscribers.

DR: Use Totogi to attract new subscribers, reduce churn, and grow ARPU. Our goal is to not only help rate transactions on the network, but actually help you grow your business. Jump on the Totogi train and get started today. Visit Totogi.com or give me a call to get started. You can WhatsApp me at 925-TELCODR.

DR: Don't forget to sign up for our awesome newsletter at TelcoDR.com and connect with me on LinkedIn and on Twitter @TelcoDR. And speaking of game recognizing game, I have great news. The Telco in 20 podcast just won a gold Hermes's award. If you love this podcast, as

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much as the judges did, subscribe on Apple Podcasts, follow us on Spotify, and share it with your friends and colleagues.

Later nerds!