DR: [00:00] I'm Danielle Royston, and this is the 50th episode of Telco in 20. Can you believe it? When I started this podcast in the fall of 2020, the whole world was in lockdown and I was stuck in Austin. Remember that? Now, the whole world has changed. Today, I'm celebrating the 50th episode of Telco in 20 and I'm out on the road evangelizing about the public cloud. I mean, what do you expect? For example, last week I was in Delhi, India giving a keynote at the Voice & Data 5G and the Future of Mobile Data Conference. I always love visiting India because it's such a fascinating place in terms of the telco industry. I'm sure you're aware it's home to an insane number of subscribers, more than a billion, while having some of the lowest ARPU on the planet.

DR: [01:01] Indian mobile operators need carrier-grade, awesome-sauce software products, and they need them at a low, low price. In my 10-minute keynote talk, I make the point that telcos need to be sure they are buying cloud-native software products architected for the public cloud. Products that are designed right for the public cloud can easily handle the performance and scale that telcos in that region need, and deliver them at a great price. That makes the public cloud a perfect fit for India. Take a listen, and I hope you enjoy it. So, let's take 20.

DR: [01:40] Welcome, everyone, whether you're here in Delhi or watching from elsewhere around the world. I'm Danielle Royston, I'm the CEO and founder of TelcoDR, and acting CEO of Totogi. Everyone knows me as DR, telco's public cloud evangelist. In case you don't know me, I graduated from Stanford University in California with a computer science degree, and I've been in enterprise software my entire career. In 2017, I became the CEO of a charging company called Redknee based in Canada, and I traveled to Mumbai to visit one of our largest customers, Vodafone Idea. We managed all of their prepaid data charging across six circles, and as an outsider coming in, I noticed something interesting. Telcos around the world were not using public cloud technology from AWS, Google Cloud, or Azure. Instead, all of the charging and rating software was being run client-server out of Vodafone's own on-premise

data centers, the way software used to be managed last century.

DR: [02:41] And I said to myself, "There's got to be an easier way to do this." I thought, "There's no way this is how telco deploys mission-critical software," and so it was in Mumbai that I first had the idea to move the telco industry to the public cloud. To me, it was a no-brainer. The public cloud will come to Telco. Since my last visit to India pre-COVID, I built Cloud City at MWC 21 and delivered two keynotes at MWC Barcelona. I've built my company, TelcoDR, where I'm CEO and founder, and I've raised a billion-dollar fund to invest in software for telco exclusively for the public cloud, buying telco software companies to pivot their products to the public cloud, and I advise telcos about the move to the public cloud.

DR: [03:31] Our industry is changing right before our eyes. The proof points of the public cloud are everywhere. Look around. For the first time at a Voice & Data conference, we are talking about the public cloud at an event where AWS is a lead sponsor. Seven years ago, there were no AWS, Azure, or Google Cloud data centers in India. Now there are more than five data regions in cities like Mumbai, Pune, Hyderabad, and right here in Delhi, representing billions of dollars of investment by the public cloud vendors. Elsewhere around the world, telcos are adopting the public cloud. Just look at the biggest hyperscaler partnerships happening globally. Vodafone has signed a strategic partnership with Google to move all of their on-prem analytical workloads to Google Cloud. Last year, AT&T sold off their Network Cloud business to Microsoft, who will refactor it to run natively on Azure, and of course the news that rocked the industry, the move by US company Dish to go all in on the public cloud, building their entire 5G network on AWS.

DR: [04:39] It is happening, and so I'm back to tell you why the public cloud is perfect for India. The public cloud is perfect for two key reasons. It can provide the scale India needs at a low price. Because India has one of the largest subscriber bases in the world with over 1-billion subscribers, any software an Indian telco chooses has to

be carrier-grade. It has to be able to handle the big scale and provide rock star performance, but India also has some of the lowest ARPU in the world, at about $2 per user as compared to more than $20 in the United States. This creates a unique challenge for Indian telco operators. Do you know what technology can do both? The public cloud.

DR: [05:29] Let's talk about the scale of the public cloud. Of course, there's the data centers the hyperscalers built here in India. That's a given. But there are other examples, like when Amazon's retail business outgrew its expensive Oracle databases, AWS built a new cloud database, DynamoDB, which can scale to more than a hundred million requests per second to handle massive online shopping days like Prime Day or Black Friday. Or how AWS has invested in building their own custom silicon. Intel chips weren't up to snuff, so AWS created their own custom Graviton chip, which has a 40% price performance improvement and is faster. The data centers of the hyperscalers are so much more than infrastructure. It's chips, servers, databases, software, and you can use all of the services of AWS, Azure, and Google Cloud and pay as you grow, using more one day, and less than next.

DR: [06:32] It's the world's best technology built and supported by the world's best technologists. There's only one catch. In order to take advantage of this technology and save tons of money, you have to select tools that are architected to be truly cloud native. If it is, it should be 80% cheaper, making the public cloud perfect for India. And what perfect timing; India just completed their record-breaking 5G spectrum auction. Because 5G was built to be cloud native, you can use cloud-native software to build up your new network. I bet all of your old vendor buddies are coming around to tell you about their new cloud-native products to go along with your shiny new spectrum. You probably have dozens of sales reps from Amdocs, Ericsson, and Nokia knocking down your door to tell you how the latest versions of their legacy dinosaur products are now cloud native.

DR: [07:28] But hold the phone for a minute. You need to understand that it's really easy for these vendors to call their legacy products cloud native. You need to be sure that you're selecting software solutions that are architected to be native to the public cloud. You might ask yourself, "How do I know if a product is truly cloud native?" It's easy. There's a super simple test; just look at the price. See, your vendors are going to sell you the same legacy products that they've always had, call them cloud native, and their price will be the same.

DR: [08:03] For example, let's look at Amdocs and their advertised pricing on AWS Marketplace. Amdocs is offering their Digital Brand Suite product for $400,000 for 100,000 subscribers, or $4 a sub, but everyone knows that every Amdocs installation is custom and there are always additional service fees. It even says so on their AWS Marketplace listing. So let's do some math. When you look at the revenue mix of Amdocs, to get an idea of what you can expect, you'll find it's 40% software to 60% services. So that $400,000 is not the all-in pricing. You'll probably end up paying closer to $1 million for 100,000 subscribers. That works out to be more like $10 a sub. Let's look at it a different way. For example, the largest customer of Amdocs is AT&T, with a hundred-million subscribers. They pay Amdocs $1 billion a year to support them, or about $10 a sub. So you can see, even though they call their product cloud native, it's still the same price. Absolutely nothing has changed in the cloud for Amdocs.

DR: [09:18] But there are companies out there, like my company, Totogi, that are building truly cloud-native products where their starting price is one cent. Still don't believe me? Then let's look at it yet another way; what Amdocs tells their shareholders. Amdocs very boldly says they are focused on the cloud, and they are forecasting to grow for the next several years. You should ask yourself, if they're delivering cloud-native products and forecasting growth to their shareholders, where is that growth coming from? How is it possible they won't face any pricing pressure, especially when there are companies out there pricing things at one cent? It's because they will be increasing prices for their customers, not lowering them.

This is a great example of something that is not cloud native. What it is instead is cloud washing.

DR: [10:16] Thankfully, there are new vendors out there that are charging 80% lower than what you're used to paying, and if you're not finding these vendors, come find me and I can tell you about them. Indian telcos have an opportunity with the public cloud and 5G to dramatically lower their IT CapEx and OpEx to operate these networks and deliver better experiences to their subscribers. For the big scale of India with low ARPU, the public cloud is perfect for India. We've seen it work everywhere and it will work here too. Come talk to me. Let's do it, India.