DR:

[00:00] I am Danielle Royston, and this is Telco in 20.

[00:03] Not everyone gets their news from TelcoDR. Some people actually listen to other experts, like my buddies over at Appledore Research. In case you haven't heard, Appledore is a global research and consulting firm based in the United States that specializes in covering the telecommunications market. They provide market share, industry trend reports, and custom research in a ton of areas from 5G to AI and analytics. And they have a podcast too, the Appledore Research Podcast, hosted by Robert Curran.

[00:45] A few weeks ago I had a chance to come on their podcast and talk about all things public cloud and Totogi. They asked me how I got my passion for the public cloud and Telco, why my software startup, Totogi, began with charging, and how we all think SaaS tools will be a big part of telco's future. Joining us is John Abraham, principal analyst at Appledore and leader of their digital enablement practice.

[01:11] We kick it off with everyone's favorite question. Did John Bon Jovi really play in CLOUD CITY at MWC 21? Spoiler alert, he did. All this and more in this 40-minute, three-way conversation between Robert, John, and me. So, let's take 20.

Robert:

[01:31] There can be little doubt that the arrival of cloud computing and its evolution into hyper-scale cloud infrastructure companies is one of the most disruptive developments in the global tech industry. By eliminating entire sets of costs and limitations, it has enabled startups to become global leaders within just a few years and has massively accelerated the development of innovative features and experiences. But telecom has been relatively slow to adopt cloud and as-a-service models, despite having what looks like a perfect first candidate in the charging systems that are the engine of revenue generation. With me here today to discuss, I'm really delighted to welcome Danielle Royston, DR, Public Cloud evangelist and acting CEO of Totogi. Welcome, DR.

DR: [02:15] Hi guys. It's so great to be here.

Robert: [02:17] Thanks DR for joining us.

DR: [02:18] Yeah.

Robert: [02:18] And to provide some additional market perspective, delighted to welcome back Appledore's principal analyst for digital enablement, that's John Abraham. John, good to be with you again.

John: [02:28] Great. Thank you Robert, and great to have you with us, DR.

DR: [02:32] Yeah, this will be a great conversation. I mean, I have lots to say, so I think we're going to have a good time.

John: [02:38] Yeah, certainly. Certainly looking forward to it. I think as Robert said, DR, you don't need an introduction, quite widely recognized in the industry. Especially as someone who said the cat among the pigeons in terms of driving operators on facing up the issue of the importance of public cloud. Maybe a bit more, interestingly, you are also known as the lady who got John Bon Jovi to attend MWC a couple of years ago. Why don't we start with that? Tell us about that, DR.

DR: [03:14] Well, I guess I'm the lady that famously took over the Erickson space. I'm sure much to their chagrin, I'm pretty sure they were not happy about that. But in 2021, if you guys recall, MWC moved from the usual end of February to the end of June and it was really just about pandemic timing. It was kind of slowing down and I think GSMA was really trying to save the show.

[03:34] And on, I think it was March 9th, 2021, Erickson announced that they were going to not participate. And I saw that as an opportunity. I was like, I think the pandemic is winding down. I think we could actually do the show. And what an amazing opportunity to take over that space. And what we did was we created CLOUD CITY and it was really kind of bringing public cloud to the forefront and we really wanted to pull out all the stops to make people really enticed in coming to MWC and traveling to Spain.

[04:10] So we hired John Bon Jovi, and it wasn't the first time I've met him, actually. I've done this before with him, so it was really great to see him again. But it was just so fabulous to be all together at a concert, a private concert. I think everyone... It was magical. People were so happy to be together and listening to music again. So it was super fun.

John: [04:32] Great.

Robert: [04:33] It was a mold break for MWC. I think they've seen some interesting sites at MWC over the years, but that was a bit different.

DR: [04:41] I know. Everyone had masks on, but everyone was holding up their cameras and taking pictures and it was amazing.

Robert: [04:49] Terrific. You've always got something up your sleeves. DR, I want to go back a little bit... You're an extremely well known public cloud evangelist. I'm interested in where and when did you become that cloud convert, if I can call it that?

DR: [05:06] Yeah, so the spark of the idea. So I am not from Telco. I mean when you talk to Telco execs and Telco people, they're always like, "Oh, I've been in the industry for..." The number starts with a two or three. 20 years, 30 years.

          [05:20] I've been in Telco since basically 2017. I was parachuted into a distressed publicly traded charging company, Redknee, and was charged with a turnaround. It was basically on the verge of bankruptcy. And so we got an infusion from a large investor of about 80 million dollars, and then I was able to raise another 75 million US dollars. And at first it was just really a turnaround story, which that's what I was before then. I'm a computer science major from Stanford and I had been a turnaround CEO at 15 different enterprise software companies. And so this was, to me, just another enterprise software company that needed to be fixed.

[06:01] But as I started to learn about charging, which I confused with billing for so long. Everyone would correct me and I hated it. But once I started to learn what it was and I asked how has it installed and how do we get new features in our product to our customers and what's a CR, I learned that we were single instance, on premise, with massive capacity being deployed, with upgrade cycles of three to five years, back porting features to get our roadmap into older installations. I'm like, "This is crazy. Have you guys ever heard of the public cloud?" Because every other industry and all the other software I'd been working with had been converting to SaaS, had been converting the multi-tenancy. And I mean it was a whole wave and it was like I had found this pocket of business, of industry that was just missing the boat.

[06:56] And so that's when I started to explore this idea. I started talking to Telco execs. My entire employee base told me I was wrong and it would never work. And I talked to one of the very first execs I spoke to was a CTO at an Indian Telco. And in a 30-minute meeting, his response was, "I want to start a pilot right now." And that was kind of the epiphany. I'm like, if this guy's saying yes, everyone will say yes. And this is the biggest idea I've ever had in my life.

Robert:

[07:30] I guess, from a turnaround background, you must get a bit of a buzz from the idea of trying to turn around an industry, not just a company. Is that what that feels like?

DR:

[07:41] I guess. It's kind of weird because the other day I tweeted about how I kind of feel it's my vocation to help the Telco industry. And it started with just helping a company. That's what I wanted to do. And give it new life. And we were doing that.

[08:00] I mean a lot of people don't know... I don't know, a lot of people don't know this or don't remember this, but Optiva went under a hostile takeover, and it really thwarted our progress on what we were doing. It really confused the customers. And so I ended up leaving because I just believed in this idea so much that I was like, "Okay, I don't have time to wait with these people who don't know what this means."

[08:23] And so to now have this opportunity to have the stage, I've spoken at MWC two or three times now, CLOUD CITY certainly was a big jumpstart to that. I think the pandemic, for me, was good because people started to work remotely and realize, you know, you can't do hand stamps on invoices. We got to use this thing called DocuSign, which is super safe and it's in the cloud. So a lot of things, it was just right time, right place and I'm so lucky and so excited and passionate about it. Yeah.

Robert: [08:56] No, that curious... It comes across. It comes across for sure.

DR: [09:01] Yeah.

Robert: [09:01] I'm conscious that Totogi was in a bit of, somewhat, a stealth mode. You had a company, you had funding, even before the company had a name. Maybe you can kind of fill in the blanks for some folks. What's the scope of what Totogi is doing today?

DR: [09:16] Yeah, I mean I keep changing the tagline. I think we're still not done because we're evolving. And so really the idea behind Totogi, it's a big vision to rewrite the software the right way using modern technology like public cloud and generative AI and all these cool things that are coming our way. To help the Telco industry lower cost of operations, get new ideas to market faster, get them all off of this bespoke crap that they have running that really just bogs them down and really hamstrings them from doing the right thing and creating delightful experiences for their subscribers.

[09:59] And so we want to solve hard problems and I think one of the big problems facing our industry is how are we going to deliver on the ROI for the networks that we're building? It was certainly a question with 4G. It's still a question with 5G. I see us talking about 6G and I'm like, "Guys, we have a really big problem in front of us." Which is, we've got to return on that invested capital for shareholders or... With flat stocks to declining stocks, this is a major problem, so what are we going to do about it?

[10:30] So Totogi thinks about monetization all day long. We started with charging. Mostly, that's my background and that's what I know, but charging is the heart of monetization. It's how you're monetizing your largest asset, which is the network. So we thought it was a natural place to begin and really excited. So we're going to keep exploring this topic of monetization and coming up with new ideas. And so it may not always be the charging that everyone knows today. We're going to kind of push the envelope and take it into using AI to generate plans and offers at an individual basis using a charging engine to monetize an individual API call, so people can pay by the use. So I guess Totogi's focused on monetization and solving big problems.

Robert: [11:22] It's all about the money.

DR: [11:24] Yeah.

Robert: [11:24] John, you got some thoughts on the charging context. Can you fill in some of the backdrop for us here?

John: [11:30] Sure. Before we get into that charging context, DR, one other question I wanted to bring up was the scale of operations. You had a big runway, more or less right up front, the 1 billion Telco Transformation Fund, which to be honest, in this industry, is not at all that common. But you were quite successful in having such a massive fundraise and then you have also deployed it quite prudently across two different companies, Skyvera and Totogi. And maybe you can just tell the listeners a bit about that and how that came to be.

DR: [12:05] Yeah, it's part of my allure and mystery. Mystery woman. So when I left, I left that Redknee assignment and I was contacted by investors in private equity that were kind of quietly low-key listening to me at Optiva. And they were interested in either hiring me to do something similar for their companies in Telco and outside. But I also had a group of people approach me and say, "Hey, we think you're onto something and we want to continue your work."

                 [12:43] And coming off of that experience, I'm like, okay, it's really important that people understand Telco, because it's

not your normal Saas, horizontal SaaS approach. The sales cycles are long. We're asking the industry to make a platform change. The people that need to make this decisions are CXOs. It's not a middle manager kind of decision. And so this isn't a three to five year kind of play. This is a decade long if not longer play in terms of the return. And if you're up for signing up for that, I'm your girl. But it's super important that we're aligned on that because I just learned at my last assignment that my investors were not aligned on the long-term vision. They wanted maybe a quicker return. I'm like, it's just not how the industry works. And people inside the industry are like, "Yep, we got it, DR. You're totally right." And people outside the industry just don't understand.

[13:35] So we raised a billion dollars, I call it, the Telco Transformation Fund. The idea is to identify the builders, like the companies out there that are building software, cloud first, API first, the right way. And Totogi was our first investment at a hundred million dollars. And then the second thing we do with it is, as you mentioned, John, we acquire Telco enterprise software companies. And again, these don't have to be cloud ready or even working on cloud. They can be in any state of any size in any location. The key is that it's enterprise software and your primary customer is a Telco, right? MVNO or MNO. And then the third thing I do is I advise, so I'll talk to Telcos about how to move to the cloud, why you should move to the cloud. And certainly I have my podcast, Telco in 20. I have a blog and a newsletter that we put out every two weeks where I share my thoughts on all the challenges, everything from the strategic discussions that are going on in boardrooms, all the way down to the tactical of how you move an application.

[14:45] So those are the three things that the Telco Transformation Fund is working on. To answer your question about the hundred million dollars, typically VCs invest in smaller chunks, especially in a seed round: three, five, maybe 10. And because Telco and especially charging, this is a system that you're probably going to install for five or 10 years. Smaller amounts of funding doesn't really give the feeling of longevity. And so it makes it really hard for people to select a brand new system

Totogi, right? They're going to be like, who are your customers? And who's battled tested this before me?

[15:25] So the hundred million dollars is really... It wasn't that we needed to use that early in the early years. It's really to give the signal to Telco execs that you can count on us, that we're going to be around for a while, and we have the funding to go the distance. So we're really careful with our cash. We try to run superficially. I don't have any offices. We're a hundred percent remote, but we do fun things like the Bon Jovi concert and spend a little money and it goes a long way.

John:	[15:54] Right.
Robert:	[15:54] Sure.

John: [15:55] Right. I think to your point earlier about COVID may have been at the right time for you guys starting up remotely, I'll just add to that. I think the fact that you picked up charging is also quite an important factor because the way I see a Telco industry, at least within the monetization sphere, we are set for disruption, especially on the charging front. Mainly because when you shift from 4G to 5G, you are going away from CDRs into something that is more API centered or HTTP2-based interfaces.

[16:30] So whether operators want it or not, they need to have a new charging system in place to support 5G traffic, especially 5G standalone traffic. The same rule does not apply to billing systems, as an example, but specifically to charging systems. So the fact that you have gotten on that journey at this particular time, I guess would be quite an advantage as you go forward. To what extent? 5G is a big factor in the conversations you have. You have been focusing a lot around public cloud. Just wanted to query you on the 5G part of that discussion.

DR: [17:14] Yeah, I mean, 5G was designed to be cloud native and that's, again, great timing for us. The engine starts with 4G, 5G, the Totogi engine, and that's what we support. But there's still pockets of the world that are running 2G and 3G and I was just having a conversation with our head

of product this week about how he thinks it's still going to be around for five to 10 years.

[17:40] Now, we don't want to go backwards in our design, but the engine can work on 3G technology and we have a way to make it work on 2G. So this isn't just a 5G thing. I think you could use Totogi even in that old world, which is awesome. But we are seeing a lot of 5G activity. That is absolutely true. And so it's designed that way. It's designed to be super open. There's these easy to use APIs when we install it with customers.

[18:12] They love... I mean, I cannot stress enough how much people love our autonomous plan design, where marketing departments without IT assistance can create their own plans. IT departments love the API openness where they can code on their own and do mass loads of plans and integrate to systems so easily. I mean, it's a modern system. It's closer to Salesforce or Zendesk than it is to my old company in Canada. That's for sure. Yeah.

Robert: [18:47] Interesting. Interesting. DR, I'm conscious of another thing that I think you've been involved with quite heavily, is with the TM forum. You talked about open APIs there and their whole contexts, the ODA.

DR: [19:00] Yeah.

Robert: [19:02] And a lot of companies are involved in that. But do you see that as a particularly significant industry association for you guys at Totogi, and how do you see that forming a part of your own strategy and then for the industry as a whole, it's that important?

DR: [19:17] Yeah, I mean it's kind of two sides, good and bad. So I think the good part of it is, it's opening up vendor walled gardens, empowering Telco IT departments to be able to maybe reduce their spend on CRs and kind of more of a do-it-yourself. It's easier to integrate to two different vendor systems. So if we have a best of breed strategy, theoretically it would be easier to integrate the two or swap one out without having to totally rewrite the integration from scratch. And I mean, we're talking hundreds of thousands of dollars. Millions of dollars go into stitching this very

complex end-to-end experience that we're trying to create, especially on the BSS side for customers. I mean it's insane. So I think it's good from that perspective.

[20:09] But I also, as we've gotten pretty deep with Totogi into... We're sitting at I think 44 API certified, one of the companies we bought a carve out from STL, I think they're 10 or 11, 12 APIs in. And so we're going to support it absolutely, and continue to climb up the leaderboard with our products. But the downside to it as we've been kind of realizing how this works is the implementation, the guts of the API are all being written by the vendors, by the individuals. And so I am like, how does this really work when I interpret the semantics of a particular field differently than someone else? We both don't have an underlying unified data model. And so how does that work again?

[20:58] So I see it happening with Open Gateway because GSMA put out a post, maybe the end of May, about the technical spec and how they're designing it, but they're going the same route as TM Forum, with this TM Forum API. So like, "Oh, that's working. We're going to copy it." Same thing. Each operator, we are going to have a common API signature, which is great. The code will be the same, but the guts of the code will be written individually by operators. And I'm like, that's going to take a long time. I mean, it's computer science. It's like we all are using the recipe for vanilla ice cream, but we all kind of use different vanilla ingredients and...

Robert: [21:43] Yeah.

DR: [21:44] It might taste a little bit different even though at the end of the day it's vanilla ice cream. So we still have that problem here. And so that's why I say it's maybe good and bad.

Robert: [21:53] Yeah.

DR: [21:53] It's a start though, for sure.

Robert: [21:54] Yeah, no, I can see that. You've inadvertently taken me into my next question area actually. So one of the

things that keeps coming up in Telco is wanting to be cloud-agnostic. There's a term I sometimes use. Everybody talks about cloud-native, I talk about cloud-nervous and cloud-agnostic. It's kind of in the middle here.

[22:19] I'm very conscious that you've been very much an advocate of focusing on choosing [inaudible 00:22:25] hyperscaler, certainly for Totogi. And I'm interested, given that you said it already, just tell me a bit about that decision. What led you to say, "Look, we're not going to do the agnostic route. We're going to go all in." And what does that look like? What does it mean for customers? How do you explain that and what that means for customers?

DR: [22:46] Well, I think it's an attitude shift with Totogi in particular, which is we are running a platform or a service, and so just like Salesforce as a service, you don't ask where Salesforce runs. You just expect it to work. They keep adding features. Overnight sometimes. You wake up and there's a whole new release and new features in there. And does it matter that they're running on AWS or Google or in the old days, their own office? Didn't matter, it was a service.

[23:14] Now, all telco software prior to this point has been run under the telco's roof and they dictate where it runs. And sometimes it goes as far as like, "Well, we don't want to use that database because that's not our database standard. Can you swap in another database?" Which is super hard and expensive for vendors to do. And so we're like, "No, this is a service." The charging in it scales automatically. It's elastic. You don't have to pre-provision capacity. You don't even have to commit to it if you don't want to. It's paid by the use.

[23:44] And so given that, I'm in charge, and so I've picked AWS because of their ubiquitous data centers. They have the most data centers of any of the other hyper-scalers. And that's very important for this industry. Maybe if I were a US based SaaS company with most of my customers in the United States, maybe not, but in Telco, I need data centers because of the geographic latency requirements, data privacy laws, all sorts of stuff. So data center ubiquity

is super important. Number two, they're probably the fastest innovators of anyone. They have the most services and they ship services really fast. So new things keep coming out and I just get to use them. And then number three, they have their custom silicon that I don't think people really realize in this industry of how amazing that graviton chip is. And now they have Inferentia, which is a machine learning chip. They have Trainium which is for machine learning training, as AI has just completely taken over the world. That's going to be super important.

[24:45] And so I am standing on the shoulders of AWS, which is a hundred thousand person, excellent talent community. And Totogi is sitting on top of that. And we have a great team. That's really why we chose it. I was actually using Google Cloud with Optiva, but when I was like, okay, we're going to go really big on this, I'm like, I'm going to have to use AWS to do that. So that's why AWS for Totogi, and it's a big change. I'm asking the Telco exec, let go of managing the stack and having this under your roof. I'm going to manage it and it's just going to work. And you pay by the use. And when you don't need it anymore, stop paying.

Robert: [25:24] John, I wanted to just ask you a question in relation to that. DRs talking about some of this kind of mindset shift, it's not so much technology per se. One of the elements of that is, what she's just mentioned, that as a service, the pay per use model. And I just wonder whether from your perspective across the market, do you see functions like charging likely moving to that as a service model? Is that a drift you can see happening?

John: [25:56] Well, in general, Robert, I'm quite optimistic about the adoption of SaaS. I think SaaS is going to become the dominant model in the future. And the reason behind this, if you look at it, there are two fundamental reasons.

[26:12] One, I think DR alluded to, is the efficiency issue. I think there is an issue of the legacy framework sucking up too much time and money and resources. That makes it unsustainable for the future. In fact, just broadly in monetization, we've got data that suggests anywhere between 65 to 75% of the total spend is just on supporting

and maintaining older systems. So you are just eating up into the potential investments that could be used to support the future. And at the same time, there is an issue of lost opportunities that come from delayed time to market, issue of scaling, which often is a big concern for many operators and so on.

[27:01] The second issue to the efficiency issue is the innovation issue, which is all about how quickly can you try new things? What is the level of experimentation that you can do at low cost? Because it doesn't guarantee you that this will be successful. And in general, Telcos have had not much of a culture of experimentation because their systems certainly don't permit them to do that, because most of the times when they have to try out something, it involves a huge upfront cost to get those systems and before they can even try out to what extent it works.

[27:37] So for these reasons, I'm quite optimistic. Now the key question is, how far is that future? And I think you rightly called out, Robert, that it's not a technology issue. I think the technologies here, I believe it's ready. I think we have a cultural and maybe an organizational issue about to what extent and when can operators fully embrace the ability of SaaS. I think that's going to be the deciding factor in the medium to long term.

Robert: [28:07] John, that's really interesting. We spend so much time talking about technology in our industry and there are other things that are really fundamental enablers here. And do others dig me into, I think, what may be the last question for today, but it's got plenty of runway, which is this question of mindset and culture change. Pretty much every conference that I've been at, I'm sure you've been the same in the last year, 18 months. Someone always talks about it, we need this industry, culture change, [inaudible 00:28:39] change.

[28:39] And that's like, we get it, but I wonder if there's a different option, which is that to change an industry, you need some brave people to make some courageous decisions. And once we start to see the effects of that, then people in the rest of the wider industry will come on board. I wonder whether you would agree with that model and

whether there are customers and pioneers that you're working with today that you would call out as being maybe those spearheading individuals and companies.

DR: [29:14] Yeah, I mean, I think one of the barriers to cloud adoption is the fear of change that is literally pervasive at MNOs. I think executives have been successful for, let's say, in the eighties and nineties of being stewards of MNOs... Kind of don't make any radical changes, keep writing the next G, the profits and the growth will come, and I'm good to go.

[29:42] And now we're at a point where boards and executives and we just saw it with Vodafone where people are unhappy with results. We have some activist activity and CEOs are going to have to put their neck on the line and try some new things. And like John mentioned, I think it's super important to provide technology as a vendor that makes it easy and cheap to experiment. You don't have to spend a number plus six zeros to get started. It doesn't take 18 months to two years to get it off the ground. You don't have to deploy it to your entire subscriber base. Why not just do a pocket, do a little digital offshoot?

[30:23] And I am talking to tier one MNOs that introduce us to their innovation lab, to their side projects, to their MVNO group, these little pockets, and that's where we're finding it in the big companies. Going down market, the entrepreneurs of this industry, I'm just going to say it, I've interviewed a bunch of them. It's the MVNO owners. These guys, they want to try new ideas. This year at MWC 23 was the inaugural MVNO Summit event. It was held Wednesday. I think my speaking slot was Wednesday at 4:00 PM. I was like GSMA, you're not really sending a strong message that you're supporting the MVNO community, but okay. It's the third day and everyone's tired. No one wants to go to this. But I threw a great party and it was really fun.

[31:09] But those guys, and I talk to them all the time, they want to build MVNOs around brands, around influencers. They want to segment a population and cater to that. They want to provide an excellent experience and these guys are risk-takers. They're early adopters. They're really

excited about the technology. They see the Totogi stuff and they're like, "Wait, how much does this cost?" And I'm like, "It's a free tier until you have 250,000 subs on the platform." They're like, "This is insane."

[31:42] So yeah, that's where I think the early adopters, at least for what I'm trying to advocate, have been in the MVNO community and then up market in these labs and the experimentations that are going on. They are going on, but they're still slow moving. I mean, they act like MNOs. They're like, "Let's do another RFP." And I'm like, oh my God, why are you doing an RFP when you can go to the AWS marketplace and for one penny sign up and have access to the plan design system and see if it works. Why are you doing this?

Robert:

[32:16] It's a different mindset for sure. Great answer, DR. I think it's very interesting. When I look back at some of where Salesforce came from, I had some time in and around the Salesforce ecosystem, and it was very interesting just how different it was. And to your point about entrepreneurial spirit, that's really, really important and very interesting to see the effects. It isn't always from the usual suspects, which is kind of the fun part. So yeah, very interesting perspective.

DR:

[32:43] Yeah, I mean, if you go back... I love using the Salesforce example because if you look at how they disrupted Siebel, which was a company very similar to say, Amdocs, in terms of single instance, the consultants would show up and say, "How would you like this customized?" That'll be five zeros, six zeros involved in that and happy to take all of that money off the table and put them in a walled garden. And Siebel was a very successful company doing that, right? As is Amdocs.

[33:11] But I think what Salesforce did was they started with small and medium businesses that couldn't afford a Siebel system, provided it as a service. They had that famous no software tagline. You don't need to own it and install it. And then eventually went upmarket. I did a great talk about this on March 9th, 2021. Such an auspicious day, 'cause that was the day Erickson bailed on MWC 21. I dropped a talk for Telecom TV where I made this analogy.

It's a great story, but people called Salesforce the ant at the picnic. And Totogi is the ant at the picnic, right? We're small, but we're really trying to change the way people think about software in this industry.

John: [33:52] DR, I'm going to go in with one last question of mine.

DR: [34:03] Okay, cool.

John: [34:03] And that is, you have been, over the last few months, a bit coy about what Totogi is working on. But at the same time, I know for a fact that you have been working on multiple things. You have launched, beside the charging as a service, you have launched a marketplace, you have launched a churn prediction tool. And I know that you're working on other things. So do you want to give some insight as to what is the ambition? Where is Totogi going to go and what kind of portfolio it aims to have, say over the next couple of years or something like that?

DR: [34:35] Well, I'm going to say what I said at MWCDU, which was, it's going to look random at first, but there's a plan, I promise.

John: [34:41] Yeah.

DR: [34:42] So like I said earlier, we really want to focus on the problems facing this industry, really with respect to monetization. We don't know how to return on investment for building out new networks. This is a serious problem. Netflix driving tons of data, which is fabulous. The Netflix CTO was at MWC and made a joke about fair use, this tax that they want, that the Telco industry wants to charge the tech companies for the network usage. He's like, "Great, then contribute to my content budget that produces all of this data that people are addicted to." And he said it as a joke, but it's true, right? It's a fabulously symbiotic relationship and they're driving data usage.

[35:31] So we bought this company out of bankruptcy that was in a SPAC. People know it as Candy. It was under the publicly traded symbol or company named American Virtual Cloud Technologies, AVCT. So this was a company

spun out of Ribbon. Before that it was Genband, I believe. It's known, I think, primarily as a UCaaS company, but also had CPaaS capabilities. We bought it for 6.7 million dollars. I think the market cap two years prior was something, I mean, I don't even know. I think it was 4 billion dollars. It was like insane. We should look that up. I shouldn't note it off the top of my head because it's just a staggering stat of the valuation of the company just right before the pandemic hit. And so that's another monetization opportunity.

[36:30] I mean, Twilio, the famous CPaaS company that brokered agreements with MNOs around the world, abstracted away the technical complexity of integrating the networks, created a pay by the use API that was super easy to use, created an amazing developer community, and has really taken over the world. They use least cost routing on their SMSs, which really puts Telco versus Telco. And they use that to negotiate the prices down. And they too, are looking for... Their biggest cost, their gross margin I think is 45%. Good, great SaaS companies should be 80 to 90%, so they're about half of what they should be. So for them, this is a big problem where they're going to try to figure out how to continue to reduce the fees that they pay to the Telcos to deliver voice messaging and video. Now they too are under, I read this week, under activist attack. Their investors are unhappy with their returns.

[37:38] But whenever you build your service on top of someone else's service, you're at risk. And with the activism going on with Twilio, with the market that they... I think their market cap right now is about 12 billion dollars. It's about a 4 million dollar company or so with three x multiple there. This is our opportunity to take it back, and the approach with Open Gateway, which again, it's like that TM Forum, the good and bad. I'm like, it's good that we're all agreeing on what the API signatures should be, but the bad is every single of those 25 Telcos are all going to have to go write software. And last time I checked, they're not really known for their software chops.

[38:17] So Totogi is like, wow, we just bought this Candy stuff. Could Candy do that? Could Candy do some Twilio magic stuff? And so we're looking at the tech and we'll

probably take a chunk out. Candy wasn't using it exactly in this way. We're going to add a twist to it. And so the Totogi engineering team will have access to that code and embed it. And so we're coming up with a solution. Again, I think the commercial and the go to market is really important because it's not just another... I don't think you just say, "Hey, it's another Twilio." I don't think that's going to work. It's going to be too hard. I mean, building a developer community, it took them 14 years to get to 1 million devs. That won't work here.

[39:05] So yeah, there's lots of cool stuff. Using the stuff that we acquire, looking at it, see what we can move to the cloud. Again, with that focusing on important valuable business problems that Telcos are faced with. I'm not just a technology for technology's sake and I don't want to just rewrite another CRM or BSS system. I really want to do things differently. And so that means maybe we don't do everything, 'cause we don't need to. Just focus on the valuable problems and I think the millions and hopefully billions of dollars will come.

John:	[39:38] Well, great.
Robert:	[39:40] DR, that's been a terrific conversation. I know we could talk for much longer and we'd love to have you on again.
DR:	[39:45] I know. I didn't even answer your cloud-agnostic question. No, maybe another day. But this was a great conversation. I think we covered a lot of ground and I really-
Robert:	[39:54] We certainly did cover a lot of ground [inaudible 00:39:56].
DR:	[39:55] Yeah, thank you so much for having me on your podcast.
Robert:	[39:58] It's been a pleasure to have you. Thank you so much and safe travels on your next journey. And we'll see you at a trade show near you soon, I'm sure.
DR:	[40:05] Probably TM Forum. Yes.

John: [40:09] Yeah, look forward to that, DR.

DR: [40:10] It'll be fun.

John: [40:10] Thank you.

Robert: [40:10] Thank you so much.

DR: [40:10] Thanks.