DR: [00:00] I'm Danielle Royston, and this is Telco in 20.

This episode is for all you telco leaders out there who are on your cloud journey. Today we're talking to a telco executive who's already done it, Nathan Bell, former chief digital officer at M1, a mobile network operator in Singapore.

Nathan was hired by M1 in 2019 to drive the company's digital transformation. His solution? Go all in on the public cloud. I learned about his plans on a TM Forum panel we did together in 2020, and I've been dying to talk to him ever since.

Could it be? Could there be a telco in the world doing exactly what I've been talking about? Nathan's work has made M1 the most cloud-forward telco in the world. Over the past three years, he's taken hundreds of applications down to 30 with the help of AWS and Azure. He has shown the telco world that you can absolutely run an MNO on the public cloud.

Today on the podcast, we're talking to Nathan Bell about his crazy radical idea to use the public cloud, how he got started, what was difficult, and the moment he knew it was all going to work. So let's take 20.

Nathan Bell is an executive leader in digital transformation with experience in roles such as chief digital officer at M1 and director of B2B digital transformation at Telstra.

Hi, Nathan. Welcome to Telco in 20.

Nathan Bell: [01:40] Hey, Danielle. Thanks for having me.

DR: [01:42] True story. I've been stalking you for a while, ever since we were on a TM Forum panel together. So this is like two years ago. The panel was called CSP Should Run Towards The Cloud, which I love that title, and on that panel we were still talking about if telco should move to the public cloud.

Meanwhile, I learn on that panel that you're way ahead of the game and already pivoting M1 to the cloud and I've wanted to talk to you on the podcast ever since.

So to start, I saw on LinkedIn the other day that you have a geography degree from the University of Kent. How did you go from geography to now an executive leader in digital transformation?

Nathan Bell: [02:24] Well, when you're building out maps for networks, you got to know where you're building them out to, so apparently geography was required.

No. I fell into telco by accident, to be completely honest with you. I was asked if I could help build a database for AT&T, and that became the beginning of a love relationship with technology. And over the years working across different business functions was like, how does this stuff work behind the scenes? Because as marketing or a product person, you'd ask a question and miraculously something would happen. So after a while, I figured I've got to sit on the other side to understand that a bit better. Then in doing so, I landed myself with the joyous responsibility of, "So you understand the technology, you understand the business, well, now I want you to bring the two together in the form of being a digital leader."

So I've been very fortunate in my journey. I always like to say it's a series of fortunate events, as opposed to unfortunate events, but it's really given me some great opportunities along the way. Now in the digital space, hoping I can sort of help others as a bit of a Sherpa, if you will, on their own journeys and guidance. But yeah, it's just been some amazing learnings along the way.

DR: [03:24] Yeah, I think that makes you such an interesting leader is that you've had experience in a lot of different functions. You've seen sales, you've seen tech, you've been front of the house and back of the house. I think that perspective is so valuable. Some people are afraid to leave their straight track. I've done the same thing where I've done different functions and it just gives you a really great perspective.

So you joined M1 in 2019. How did the idea about using the public cloud come about?

Nathan Bell: [03:53] I think for us, as M1, our goal was to look at how do we become a digital business that is a provider of telco services among others. We looked at a few different aspects of that, of saying, "Look, maybe we can just go and work with an all-in software partner who will deliver everything to us. Maybe we can go and customize it ourselves. Maybe we can go and leverage our best-of-breed architecture."

Then off the back of that, the question became, "And how are we going to do this? We're going to do this on-prem? Are we going to do this in the cloud? Is it going to be a bit of a-

DR: [04:23] Hybrid.

Nathan Bell:	[04:24]	... hybrid of the two?"

Actually where we landed was to be able to go and say, "Well, look, the trend is going to be moving to the cloud." Why? Because telcos need to be asset-light in terms of what they're doing and where they invest their money in terms of where it's going to deliver valuable outcomes. Looking at all the software, there was kind of more SaaS-related anyway. So for us, it really became decided in terms of, "Look, if we're going to do this, we've got to be bold. We've got to make sure we leave a legacy for the future. Not legacy tech, but a legacy for the company that we'll keep evolving and building on." I think that sort of led us to the bold strategy, as some have come to call it, going the radical path of all-in on public cloud.

DR:	[05:05]	Yeah. I mean this is 2019, so there weren't a lot of stories about telcos doing this, going all-in on the public cloud. I think for you it really was, do as much as you could. How did it start, like, on a piece of paper? How did you guys start to learn to do this?

Nathan Bell:	[05:24]	Yeah, I think it probably should have been a napkin because I'm pretty sure it was over a drink somewhere.

But I think what we sort of landed on was the principle that being cloud-native meant that we had to make sure there was no avenue for us to go back to being on-prem. What I mean by that, therefore, is we looked at all of the systems that we were going to keep as part of our transformation and say, "Which of these are going to reside on the cloud?" If we came up across a system that wasn't going to be, we asked ourselves why not? If it, therefore, was never going to be able to work on the cloud, we actually added it into the ecosystem, replacing that system anyway.

So we really started off with an ethos of this is all going to be in the cloud. I think that's one of our biggest drivers is that always sort of setting the outcome as the target and then asking the why not, rather than the traditional why, if you will. So I think that's what became a driver.

So we have everything now on the cloud. For a few of the systems that we actually have a path to replace them for cloud-native systems anyway so that's not going to matter.

DR:	[06:25]	You put a timestamp over their head of when that application is retired.

Nathan Bell:	[06:30]	Exactly. So there's no mechanism to be able to upgrade it. There's no mechanism to be able to refresh it. It's, literally, put in the category of end-of-life and, therefore, will be replaced.

So by having that ethos, it really drives a different approach to how you go and execute the platform, which I think would be my biggest advice ever is find your outcomes upfront and then keep asking the question why not? Because if you find that you're asking the question why, you probably haven't defined the outcomes to begin with.

DR: [06:54] Yup. So give me a sense of scale. How many applications did you start with and how many did you end up with?

Nathan Bell: [07:01] We had over 150 unique applications and we're now down to around 30-

DR: [07:07] That's so awesome.

Nathan Bell: [07:08] ... which is great because one of the other goals we had for M1 as a digital business is to be self-sufficient. That means our software engineering teams, our data teams, our security teams, our operations teams all need to be able to support this without having an SI or a partner on that frontline with us. Yes, we leverage our partners if we can't solve the problems ourselves, but that was part of the objective.

But it was a significant rationalization and part of that is going best-of-breed is them instead of saying for a different product, we need a different system, it was really making sure we made technology choices based on what was going to give us the right support then moving forward. It was always on the basis of having the elasticity in the cloud, having the consolidation and knowing that we would be able to self-manage.

I think our cloud infrastructure's been a great example of that because I've now got a team who every month create a report that goes to the CFO and it goes to myself, that goes to respective business head to tell them where are we at in the consumption of cloud across the different instances that we're leveraging. At the same time, being able to come up with ways to optimize so that we're consciously aware of the cost because that's always one of the big things. People talk about if you go into the public cloud, then everyone just keeps spending. That doesn't have to be the case.

DR: [08:18] Yeah. Well, I think a big difference in the way that you talk is that you're doing, I'm using air quotes, truly cloud-native. So it's easy to, I'm going to call it cloud porting, throw into a Kubernetes container, shift it over to the public cloud, "Oh, we're quote cloud-native" using the transitive property of Kubernetes.

But I think to really understand the public cloud and use it in the right way, you have to do some of the things that you said earlier, which is use things like SaaS, refactoring things, ditching things back on-premise that can't make it, that won't be cost-effective and find tools that are truly cloud-native. I think we're still a little bit in our industry loose with the words cloud-native, everyone's slapping fat-free on things everywhere, but I'm like, "You really have to look under the hood."

So it sounds like you guys have done that work to make sure you're moving it in the right way, rather than just shifting it and dumping it in the cloud. Because I think that's really where your costs get out of control is that it wasn't really born in the cloud or meant around the cloud, but you forced it and so it's sitting in the cloud and consuming a lot. Did you guys run into those kinds of issues and battles?

Nathan Bell: [09:34] To begin with, we did actually. We were all so excited about the fact we'd achieved it in terms of moving multiple applications, whether it was our CRM applications, whether it was our identity management web, a number of other elements that we were leveraging. I think for us, we started high-fiving going, "Oh, wow, look, it's all in the cloud. Aren't we amazing?"

Then, of course, you get over that honeymoon period of like, "Oh, hang on a second, why are the costs going up?" No disrespect to the team, but there's a degree of curiosity that goes on going, "So I don't have to acquire the hardware to go and run a project. Now I just go and spin up some infrastructure-"

DR: [10:07] Exactly, yeah.

Nathan Bell: [10:08] ... and I can try some stuff out." And we love that.

But the problem is when you've got a bunch of software engineers and data folks who are trying stuff out, all of a sudden, the costs can jump up quite quickly.

DR: [10:19] Exactly, exactly.

Nathan Bell: [10:20] So there's a great Spider-Man analogy that I love, "With great power comes great responsibility," and you've got to drive that with the team to make them understand, "Look, absolutely, we want you to try lots of stuff. But if you go out of your budget, you are responsible and you have to come and justify in terms of why that's the case."

It took a few months, but I think we then started to see some really great outcomes where people would pride themselves on coming and showing the work that they'd done, but at the same time, we're putting a hand up saying, "Look, I can't justify this. We're going to turn it off and we'll park it and come back and try again later."

But that takes time. You've got to give people a chance to fail, to learn, to understand what they're going to do differently.

DR: [10:55] Absolutely. So just reading, again, just press that in articles that I read about M1's transition to the public cloud because I truly have been stalking you, I noticed that you guys selected two hyperscalers, at least you were using both AWS and Azure. So why the two? Is there one that's more of a leader and the other one's like backup? What's the rationale for using two different hyperscalers?

Nathan Bell: [11:21] I'd say there's a few reasons. Part of it is I don't think it's ever right to go in just with one. I think you always have to be able to ask the question and challenge the question of what's the value being realized versus the costs or the price that's being paid? So I think that's really, really important.

But I think at the same time, we also recognize that software is not a constant. Software evolves and we find that some of our software partners are actually saying, "Look, there's some new things we're doing with this hyperscaler and we'd suggest looking at this for the future of what we're going to do." So having that flexibility I think is always important from that regard and that just purely comes down to the evolution of their cloud platforms.

Again, as part of the ethos is that we will keep evolving M1 as a digital business. Like any digital business, there is nothing in your organization that should then just be sitting still and parked and come back to in 10 years if you're going to be truly digitally keep evolving and challenging the marketplace.

DR: [12:15] So it sounds like a little bit of pricing and negotiation, but then also just two different technology bets.

Nathan Bell: [12:21] Yep, exactly.

DR: [12:22] Yeah, that sounds awesome. I think one of the hardest parts with a transition like this, right, where you're all in, I love that you guys are working backwards from where you want to be into where you are today, rather than where you are today and just moving forward. I love that perspective. AWS does it. They write the press

release that they want to be true and then they work backwards from that.

I think one of the hardest things to do is start. What were some of your first milestones that you laid out for your team? How long did it take for you guys to start to see that progress and hit those first goals?

Nathan Bell: [12:54] From a digital platform perspective, we actually were able to get a working architecture in terms of being able to see data flow through in three months, which was just insane.

DR: [13:04] Yeah, it's awesome.

Nathan Bell: [13:05] We're talking close to 30 elements all working together.

On the pivot to the cloud I think, for me, the first milestone was when the first application that we're intending to keep was moved to the cloud. This might sound weird, but any IT person will understand this. We moved it to the cloud and we heard nothing from anyone in the business and we're like, "This is awesome. This means we've moved it and nobody knows it's been moved. It's still working the way that it is meant to." So I think that for us was one of those first milestones.

Then we just started getting our confidence up a bit more. We always have some different learnings of versioning that we got wrong a couple of times and had to go back and correct. But ultimately, I think for us it was just that continual progress and celebrating what percentage had now been moved onto the public cloud infrastructure and being able to call that out and see in terms of our outcome we were targeting, we're on the right track. So I think that was exciting.

Having this dual path of the evolving digital platform, the migration into the public cloud from on-premise systems was really exciting for the team and when you see progress, I always like to say progress encourages further progress. Why? Because people love to succeed and as long as you keep celebrating that, you're in the right path.

DR: [14:14] Well, it's that flywheel of change, right?

Nathan Bell: [14:16] Yeah.

DR: [14:16] Everyone's pushing on this big goal and you don't see movement and it's a little bit demoralizing. They're like, "Is the flywheel even starting to move?" Then when it first starts to just move an inch, it

builds so much more confidence and belief that it's working. People push harder and the flywheel starts to go faster and faster and faster. Then once it starts spinning, it's like game over.

So let's talk about that. Was there a special moment in this project where like it was the tipping point and everyone started to believe and you knew it was going to be successful? There's always the depths of despair where you're like, "What am I doing and did I make a mistake?" But then there's the other side, which is the point of which you're like, "This is going to work, we're doing the right thing," and then more and more people are believing. What was that moment like?

Nathan Bell: [15:03] Well, I can tell you every day I was asking myself if we've made a mistake, but that's probably a bigger conversation in terms of the scale with which we were trying to move.

I'd actually say the tipping point for us came about a year ago now when iPhone was doing a pre-launch and we really had a new digital infrastructure as well as our legacy running side by side. To see the digital platform outperform legacy for the first time in terms of straight-through provisioning, in terms of the data that was being presented to our teams, in terms of the quality and the stability of the platform, the elasticity of the system, I think that was the aha moment for a lot of people saying, "Okay, now we know we're on the right path. How do we keep pushing this forward?"

That's just continued over the months that followed. So now we're at a point where we're finishing off the migration from legacy onto the digital platform for consumer, which again, I just find insane given that it's just less than three years still. But that's incredibly exciting. So I think for us, that first large scale event and seeing that performance, I think that instilled a degree of confidence and excitement across the teams as well.

DR: [16:09] Well, yeah, I mean, let's talk about the people in that, because so much of transformation is about getting your teams behind your crazy ideas, these radical ideas that leaders have about, "I want to do this big project," and individuals in an organization are like, "What are you talking about? We've worked so hard to get it to work the way it is. You want me to rip up my work and shift to the public cloud?" So how do you guys actually start to get your people ready for the shift to the public cloud?

Nathan Bell: [16:33] Danielle, I always say if people didn't have to be involved in transformation, the programs would be really easy.

DR: [16:40] Totally.

Nathan Bell: [16:41] I think the human factor, as I like to call it, is always going to determine the success or failure of any transformation, not the technology.

DR: [16:48] I totally agree.

Nathan Bell: [16:49] So I think for us it was a very important path from a knowledge perspective. It was just immersing our people in a ton of training and then off the back of that little mini project so they could demonstrate what they've learned and how they're bringing that to life.

I think the challenge, though, then became, literally, telling people, "Cool, now you've learned it. You're now going to be responsible for it." I think that was a real challenge that we faced. On the surface, people are excited, but when it comes to the doing, everyone gets incredibly nervous. "What if I get this wrong?" So you've really got to be creating a culture of, "Look, it's okay to fail as long as we're learning something."

DR: [17:21] Exactly.

Nathan Bell: [17:22] "As long as we don't keep having to learn the same thing because that's just the definition of insanity." So as long as we're giving these people the right opportunity to learn in the right way, to be empowered in the right way, then I think it works.

But yeah, the people side, I think for every transformation project I've been involved with, that's always the hardest part because when the rubber meets the road, it becomes a very different conversation that requires much more hands-on and constant coaching engagement. So having strong change management practices, having strong agile coaches that are guiding the business on, that it's okay to fail as long as we learn, all of these sorts of things become absolutely critical. These are practices that I think any company should now be picking up in terms of the way that they operate. It's just going through a transformation, it's even more important.

DR: [18:04] Well, I think there's two things that you said there that I really want to reiterate, which is number one, creating space for failure. I mean, I've worked in large organizations, 29,000 people, so that's pretty big. But the bigger the company gets, a lot of times there's this fear of failure, like can't fail and so no one sticks their neck out.

But I think the second thing is a big part of cloud is on-the-job training. I mean, there's only so much you can learn through the certifications of the hyperscalers or reading books or even just

baby experiments. But what I like what you said was, "We put people in charge of real public cloud applications. And while they made those mistakes, boy, did they learn because there was something, real writing on it." So that's the best way to start, is just putting stuff in the public cloud and seeing what happens. And I love your IT, no news is good news approach to movement, and I think you just got to start doing it.

So I guess now with this experience under your belt, if you had to do it all over again, what would you do differently?

Nathan Bell: [19:06] I think the main thing I would do differently, and this is going to sound completely counterintuitive, is go slow to go fast. What I mean by that is actually expose the business teams and the IT teams together to what are the tools and cloud-based products that they're going to start using so that they actually feel that they're doing that in a sandpit environment so that when you get into the live systems and they are looking for it, it feels more like a transition than transformation.

I'm a huge advocate for technology transformation. People transformation is near impossible. People have been doing things in a certain way for a very, very long time and, therefore, you've got to give them a chance to unlearn and relearn. I know some of this sounds like buzzword bingo, but it's really, really important for people to understand that unless teams are working collaboratively to drive some of these outcomes, whatever you do from a technology perspective, it's not going to matter.

So building up that confidence and trust between the teams now working in a fundamentally different way is really going to be the successful element. It might feel painful to begin with, but getting it right is really going to give teams the velocity that they need going forward.

DR: [20:11] But there's always a moment in these projects where people are like, "My life is better, my job is better. This is easier. Why didn't we do this sooner?" That's when you kind of know that you're winning the battle on the people-side.

But in the beginning, I think you're totally right. Digital transformations, any kind of transformation, it starts with humans. I spend so much time on my podcast talking about the people side, but it's so critical to something like what we're doing here, which is a platform change for the industry from on-premise to the cloud-

Nathan Bell: [20:45] Absolutely.

DR: [20:45] ... and it's absolutely critical that people understand it. That's why I sort of self-appointed myself evangelist of the public cloud because someone needs to talk about it and educate people.

Nathan Bell: [20:54] I think, Danielle, someone needs to talk about it and remind people that it's going to be okay. Every time there's a big bold change, everyone's terrified of being the person that goes first.

We probably aren't aware as much as we should be that actually there are a lot of people already embarking on that path and it is going to be okay. It's just there are lots of things that we can learn, and I think through your podcast and through various other folks in terms of sharing that message more and more, hopefully, people get a bit more comfortable with it.

DR: [21:20] Yeah, you got to be first. You got to take that step and start with an application that maybe is not mission-critical, but get that experience and get going.

Nathan Bell: [21:28] Yep.

DR: [21:29] Nathan, it's been awesome having you come on the podcast to tell us a story about the transformation you did at M1.

Now another storyteller that's fabulous, famous for it, is Bruce Springsteen. So tell me, how does a guy from Australia become a huge Springsteen fan?

Nathan Bell: [21:47] Oh, I think it's one of the few albums my dad would let me play when I was very young and I thought it was awesome. I thought he's a great storyteller in his music. Then discovering through the power of karaoke, I could make people suddenly reach for their fingers and put them in their ears while I belt it out, one or two of his songs and would feel very much satisfied. But I love the guy. I think he tells amazing stories through his music.

DR: [22:10] Yeah. Just like the ethos of the American hard worker, he's amazing and so I think I'm going to name the podcast Born to Run in the Cloud with Nathan Bell.

Nathan Bell: [22:19] Love it.

DR: [22:20] Nathan, thank you so much for your time today coming on the podcast and telling us a story and look forward to catching up with you soon.

Nathan Bell: [22:26] Absolutely. You as well. Thank you so much for having me.

DR: [22:30] 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.

You may wonder why I'm always talking about HR. Well, you heard Nathan. The human side of your transformation will determine its success or failure. Choosing the right tech is important, but unless you bring your people along on the journey, your cloud project will be DOA, dead on arrival.

The unfortunate reality is that your people will fight you, both to your face and behind your back. Their fears will kick in because you're changing the status quo. They're going to tell you it can't be done because of security, data regulations, privacy and a whole bunch of other excuses.

It's up to you to get the real issues out on the table and to figure out what will motivate them to be part of your cloud journey. Maybe it's money. I know that would work for me. Building cloud skills can boost their compensation by 30% or more. But it might be something else like job security or even the need to be part of something challenging and great.

When you figure out what's in it for each individual person on your team, you'll be successful. It's going to take mind-numbing repetition. It won't be easy, but the rewards will be unbelievably amazing.

Speaking of amazing things, I hear all the time how much people enjoy this podcast so thank you very much. We want even more fans, so don't forget to share it with your colleagues, follow us on Apple podcasts and Spotify and leave a review. DM me on Twitter @TelcoDr, connect with me on LinkedIn, or give me a call or WhatsApp me at 925-TELCODR.

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