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EDITED TRANSCRIPT

VZ.N - Verizon Communications Inc. at Wells Fargo Virtual Media & Telco Day: 5G & Streaming & Beyond

EVENT DATE/TIME: JUNE 07, 2021 / 1:30PM GMT

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PRESENTATION

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Good morning. So we're continuing on our 5G forum today, and we're very pleased to present Kyle Malady from Verizon. Kyle, thank you so much for joining us today.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

It's great to be here, Eric. Pleasure.

QUESTIONS AND ANSWERS

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

So Kyle, just to start off. You've clearly been very busy at Verizon recently. The biggest news, obviously, this year has been the results of the C-Band auction, where you guys spent just over $50 billion. So maybe, just to start, you could talk about what was so compelling about C-Band that you guys felt like you wanted to go so big and put that amount of spectrum on your balance sheet.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Sure. So before I get into that one now, let me just -- I got to make a statement as per Brady. You guys saw there was a safe harbor statement that was flashed over there, and I may be making forward-looking statements, et cetera. So you guys know the drill there, so I'll just make sure -- I just want to make sure I got that out of the way or Brady will get mad at me.

So to the question, yes, we're -- I mean, we're super excited, I'm super excited, the company is about the C-Band auction. We look at this as, frankly, as generational-type auction and spectrum. So -- and we didn't see another auction that would have the girth, if you will, in terms of megahertz. So we went pretty big here, and we're very excited by it.

I mean if I look back over history, I've been doing this an awful long time. And we started off with just a small sliver of 850 back in the day, and we're still making use of that spectrum. So the amount that we've got in this particular auction, we basically doubled what we had in low band after what we've accumulated after all these years.

So it's a spectacular result. We love the spectrum. We love the position where it is. It's a global band. We'll be able to use it for roaming as soon as we get it up. So right now, really, it's all about getting it cleared and working with the satellite companies to get it cleared and then -- and building out. So that's what we're -- the minute after we were allowed to talk about it, that's what we started doing.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Yes. Fair enough. So you did put out some pretty aggressive targets in terms of coverage. I mean this is a very, very fast build when you -- when we really think about it, particularly given the scale. So are you still fairly confident in the time line you put out back in March?

And I guess, related to that, there's been some concern within the industry about supply chain shortages. Are you seeing any of that from your equipment vendors that could potentially push out any of the time lines in terms of coverage that you hope to achieve?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. There are 2 things there, Eric. We're on track. We're -- it's going very well. We thought this would go well because, let's face it, a lot of the steel and the equipment and towers and all that kind of thing, a lot of it's already built, right? So really, this is no more than what we traditionally do in terms of just adding a carrier to an existing cell site. So from that perspective, it's going very well. We were planning well before for this, and it's something we do, we're good at it. And we've honed the processes over the years, and so we're on track there.

In terms of the equipment, we watch that basically on a daily basis. And right now, all of our supply chain is intact for all of the gear that we need to put on for this year and beyond that.

So we're watching this every day. It -- I can't -- you never know what's going to happen, but we keep on top of this. And we're working with our vendors, like I said, daily. And we know that our chips and our parts that we require to build the kit are there for now.

So I think you've seen -- we've seen issues in other parts of the supply chain, and we need to watch that. But luckily for us, in the telecom industry, our chips, et cetera, are kind of the top-of-the-line stuff, and we've always given good -- as an industry, I think, give good forecast to the chip makers. So I think we've been on our game here in this industry and so far, so good.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Great to hear. So related to that, obviously, as you mentioned, a lot of this will be overlaying some of your existing macro towers. I think you said in March that you would add radios to 7,000 to 8,000 sites just this year alone. Is the plan over the next few years -- obviously, you have some of the spectrum block clearing in 2023, to really upgrade nearly all your macro tower sites? And then as you think about densification over time, maybe adding some additional small cell or fiber connectivity in some of your larger markets? How do you think about that time frame and integrating those 2 aspects, the macro overlay and the potential densification?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. Well, listen, I think we're going to always -- we continue to build cell sites. Brady, I always laugh at Brady. I always tell a story. Back in the day, we built like the 100th cell site. And we thought that was like it, and we weren't going to need any more. We continue to build out, and I see that going on for the foreseeable future. Our network is very dense right now, so laying in the C-Band is not a problem at all.

Certainly, we're going to continue to build cell sites. At some point, all of my cell sites will have C-Band in them. That's just the way it goes. As we keep bringing on new technology, the old technology goes away, we bring on the new technology. And all of our cell sites and all of our assets will -- all of our macros will have that. So we're going to continue to build out in the dense areas. We don't need to have any fill-in in the suburban areas. We don't need any fill-in. But certainly in some rural places, we'll be putting in fill-ins, but we'll also be putting in LTE, et cetera, as well as we go.

Now at some point, it all becomes C-Band and then LTE will go away. But we're going to continue to densify as we normally do in normal course of business. And that's right. I think we're looking good. I'm still looking good for 7,000 to 8,000 sites this year.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Okay. Great. And then another question that we've had recently. What are you seeing in terms of actual propagation for outdoor deployments for C-Band today? Is there kind of a range? I'm sure it's very dependent on the geography in which you're deploying it.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Right. So once again, this kind of almost gets back to the densification-type question. The C-Band carries further than millimeter wave, but not quite as much as, say, 700 or 850. But our networks are designed to have overlapping coverage. As a matter of fact, sometimes when we have a cell site go out of service for, say, there was a fiber cut or what have you, people don't even notice because the network is so advanced, right? So other cell sites right around that have overlapping coverage and can serve that area.

So it's very dense. It's going to fit right in. And the propagation is just what we expected it to be. I mean there's been some noise in the past about it. Some people were saying, well, it's not as good as 2.5. Well, if you do the -- you do something called link budget, if you do the math around it, and because of power restrictions and whatnot in 2.5, the propagation is very similar. But frankly, that doesn't even really matter. Our network is very dense the way it is. That's what we built it over the years, and C-Band fits right and it will be not a problem to put it in, and we won't have gaps.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

And Kyle, one other topic that has come up. Some of your peers have talked about maybe pairing mid-band such as C-Band with low-band spectrum for the uplink and helping to extend its reach. Is that something that you would consider? And maybe what would be the factors that would play into that decision?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. I mean that, honestly, we've looked at this for years. It's certainly something that's possible. But given the TBD nature of the spectrum we have, I frankly don't see the need to do anything like that right now. I mean it's good to have in your back pocket as something you would do. But I would probably -- if I was going to do it, I'd probably use like my 850 spectrum for that anyway. I don't know if I need to go buy anything or do anything differently. I can set it up with the spectrum holdings I have right now. So is it a tool? Is it a capability? Sure. But is this something that I need to do or I'm looking to do right now? No.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Sure. So I wanted to flip to what you're doing with fiber and small cells. So there's been at least a perception from some investors that maybe you're reprioritizing some of your capital budget away from fiber and small cells and into kind of macro coverage for C-Band. Maybe you could kind of set us straight on what you're doing today. It seems like the C-Band, you already announced $10 billion was on top of what you're already spending. So -- and you've already talked about building to more ultra wideband small cell sites this year. So as you look over the next couple of years, do you think that maybe some of the capital will be shifting away from fiber and small cells? Or is that not necessarily the case? You guys have the balance sheet. You can do it all at once.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. No. Good question because, I guess, if we were reprioritizing, I guess we wouldn't have had the extra -- we wouldn't layered in the extra $10 billion. So our plans for small cells, millimeter wave and fiber, they continue. And that's why we put on the extra $10 billion, so we can get the C-Band up. So we're continuing with that. We're going to continue our programs there. Then we're adding the C-Band in.

And that, frankly, it really -- all it's doing is amplifying and accelerating our Network as a Service strategy. And now -- and the way we're looking at it, forget about the spectrum bands, all that kind of stuff. We're just putting out a lot of capacity into our network so we can support the multi-use cases that we're putting on the network. As you know, wireless networks were always traditionally built just to carry kind of wireless traffic. Now we're going to also be doing the wireless traffic, mobility traffic as well as fixed wireless access. So we're going to -- we have all these tools in our toolbox, different spectrums. The millimeter wave spectrum, we have a ton of it. It's fantastic. You can get a lot of capacity into dense areas and with fantastic capabilities. And now the C-Band will just allow us to go much broader there, so yes.

And then the fiber, right now, we have about 1/3 of our cell sites and small cells on our own asset. And I think that's -- we like the owner's economics of that. We also like the control of the network because we can maintain quality and reliability. And at the end of the day, that's kind of our brand promise to our customers. So we look at it more in terms of putting this -- these assets, this capacity out there, so we can really accelerate our plans really. That's how we look at it.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Great. And then related to that, obviously, you have this OneFiber project where you're building in north of 60 cities. Has that continued at its pace that it was at last year? Has it slowed down at all? And at what point is most of the network core already built and you've really flipped to more kind of success-based fiber CapEx once you get beyond the core build?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes, good question. So we are pretty much -- we're getting there on the core build. I'd say maybe 80% there roughly. And now it's more connecting in a lot of markets. It's more connecting the cell sites into it and making what we call laterals. So building the fiber laterals to cell sites or what have you and connecting back to the core. So we got a couple, 2, 3 more years left on our fiber build here. And then primarily, it will be just success-based builds.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

And on the small cell topic, you mentioned before that you prefer to have owners' economics with small cells. But do you see a lot of opportunity to partner with folks like Crown Castle and ExteNet? I mean what kind of plays into your decision, both with small cells and fiber, which in many cases are somewhat similar in that a lot of the costs from small cell come from fiber? How do you make that decision? Is it market by market, geography by geography, whether you want to self-perform versus lease with a third party?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. It's exactly what we do. It's market by market and even in submarkets. So I have some markets where I'm doing some of the market myself, and then I have Crown or ExteNet doing other parts for me. And really, it's really just like -- it's really just a local engineering kind of exercise, if you will. If somebody has some assets in the ground already that -- and it's compelling and I can get a decent deal, all right, then maybe we forgo the owner's economics of the whole thing, and we do something. We've also done it in a couple of places to accelerate the time to on air, if you will, where somebody is already building something, and it just made more sense for us to hop on.

But by and large, most of what we are doing is on our own asset. And like I said, we like the economics of it, and we like the control we get and the ability to make sure we have the reliability. And when things do break, we can fix it, it's in our own hands. So we like where we are with that.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

And kind of related to that, I wanted to touch on the millimeter wave spectrum build-out. So I think you have said in the past that you expect, over time, 50% of your urban usage will move to millimeter wave in the next few years. So do you need to undergo materially more densification to support that type of usage to get to 50%? Because that's a big chunk, I believe, from where it's at today.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. So as we've done over the past, over the last year or so, we've been honing our processes, et cetera, to put in millimeter wave. Now millimeter wave is different than C-Band. In C-Band, I'm able to leverage the gear, the towers and everything that I have out already deployed. Millimeter wave is a different story. I need to build, right? So I need to do the zoning, I need to lay the fiber, I need to get on -- get the equipment and get them on to light poles or et cetera. And so it's a little more involved. But we've really got our groove on here, and we're really in a cadence of it. So we're going to be putting on 14,000 this year. And you'll see us continuing to do the same amount for the next few years.

And what we're doing is we're just going to keep building this up, get scale in urban areas. And even, frankly, you'll see it go into with some small suburban towns where there might be a town center, something that could use the capacity. And then you see us going into a lot of where people gather, right, like stadiums, et cetera.

So we have a lot more work to do to continue to put this asset out there. But I'm really happy with the team. Even during COVID times, they were able to continue our momentum. And we're on track to put out what we said we were going to put out this year. As a matter of fact, we're a little bit ahead even this year so far.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

What are you seeing in terms of the indoor opportunity either with millimeter wave or with C-Band in terms of like DAS or large venues? Obviously, COVID could have had some impact, potentially. Although it seems like the economy is kind of reopening. People are going back to stadiums, going back to offices. Did the pandemic have any influence at all on either the pace at which you could build because no one was around? Or did it have any influence at all in kind of how you thought about architecting the network? Maybe you could talk about that.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. Because we didn't really think about that a lot because as we were watching, when we first got into COVID, as we were watching the traffic patterns, obviously, the urban traffic patterns went down a lot, and rural and suburban went up a lot. And so we started -- we were thinking and debating, hey, how long is this going to last? Does it change how we deploy our capital? Should we change how we're deploying our capital? And we decided that, you know what, probably looking back on it, obviously, we kind of get through this thing as people -- as scientists came up with the ways to combat this. And so we just stuck with what we were doing. So we continued to build in building.

It was kind of a bummer for us though because we were putting in this -- we're putting in all these gear. We see the great capability, but nobody was in the stadiums. And so that was a bit of -- we were a little disappointed with that. But then I'm glad we did it because here's a good example. In the Indy 500, we stuck to our guns and we put millimeter wave in there. And I think there was like 100,000-plus people at that event a couple of weeks ago. And I got a bunch of texts from people -- text messages from folks who were there that just said it was unbelievable experience because all the capacity that we flooded the place with, people were able to -- they didn't get the spinning wheel of nothing happening. They were able to actually surf the web and do things.

So it was -- and that's the kind of thing I think as people come back, I'm excited to see. When they see the capability, I think they're going to get excited. They get millimeter wave inside of a stadium or venue and they're able to do things that couldn't be done before. And I think they're going to be excited by that.

But then it also -- it gives us possibility for new applications and new experiences for people in the stadiums. So we've been working a lot with the NHL, the NFL, NBA, to work on -- with developers to work on some of these new experiences and also for -- in concert halls, et cetera. So I think I'm excited now that people are coming back And we'll start leveraging the platform and developing new things in the platform. So I think there's excitement that's going to build here as we go.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Yes. That's great to hear. So one of the growth -- new growth vectors that you talked about at your Analyst Day a few months ago was really expanding 5G Home. And you're going to use -- you're going to leverage, obviously, 4G spectrum, millimeter wave and then eventually C-Band once you get that built.

So how do you, from a high level, really plan to manage capacity growth? Because obviously, there's a lot more usage that goes into home broadband networks than there are in your wireless network. How do you think about kind of managing the core wireless capacity, while also being able to use that excess capacity for home broadband?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. So that's the trick, right? And that's why we went pretty big with the C-Band as well, as well as with millimeter wave spectrum. So now we have a lot of spectrum. And that gives me the confidence now to be able to support a multipurpose network, if you will, for both of these use cases.

As you know, I mean, we could have done this a decade ago with LTE, but we just didn't have enough spectrum to do it. And what you've seen us do in the last handful of months, we've actually started to sell some fixed wireless access in LTE, but only if we had some spare capacity, right? But now that if I bring millimeter wave in and I have the C-Band, I bring all my spectrum to bear, I feel confident that we can do this. And I feel confident we can do this in a good way, a way that is consistent with the quality people have come to rely on Verizon for.

So we're going to engineer this right. We have enough spectrum to do it. And I'm excited about the possibilities for us from a -- meeting customers where they want to be. And without this millimeter wave and C-Band, we couldn't have been able to support this kind of use case.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Most investors have thought of the 5G Home opportunity as primarily Consumer. But are there opportunities to sell this product to enterprise SMB customers, public sector? Are there ways to monetize it outside of just the typical Consumer residential footprint as well?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

We think so. An obvious one for us is -- SMB seems to be a no -- kind of a no-brainer. So we think there's things there. And then it's just if we make it easy to use, if we make it easy to buy and set up and utilize, people will probably figure out ways to use that we haven't even thought of yet. So I do think it's something that will be used across the board. I mean you could use it at Wells Fargo. You could use them in ATMs.

You can use the service for a whole host of things, if you make -- if it's easier to use, more reliable, good price point. So if the value is there, I think people will use it no matter kind of -- no matter what segment of the economy they are in. So -- but obviously, we're a heavy Consumer company, and that's where we're going to start -- we're starting.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Sure. That makes sense. So you talked about getting kind of multi-gigabit-type speeds -- peak speeds on millimeter wave for home broadband. So what will that look like, obviously, on the rest of your home broadband footprint, which will -- be 4G, but then eventually, a lot of it will flip into

C-Band once you get that built out. How will the end user experience compare for, say, C-Band 5G Home versus millimeter wave 5G Home? Obviously, there has to be some speed differential given the different frequency characteristics of the spectrum.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. I appreciate that question, Eric, because it's something that -- it's interesting. The way -- for whatever reason, I guess, the way the market has evolved with broadband seems to be really just kind of about speed, right? And it's a little unfortunate because we've had gigabit and Fios forever. But nobody uses a gigabit -- hardly anybody uses that amount of bandwidth. You don't really need it. I mean a gigabit is used to run the Google data centers.

I mean so now what we do is we -- we're always showing what millimeter wave is capable of. We'll be able to get to 5 gigabits a second, probably 10. But nobody really needs that, right? I mean that's -- what really -- what it shows, though, it shows the amount of capacity that we are able to bring to bear now in wireless. So that's, once again, ties back to now, I think we can run multipurpose network because we have this capability.

In terms of the Commercial offering, it's TBD more, I guess, as we start getting deeper and deeper. We have the Commercial offering now with millimeter wave. As we get C-Band out, Ronan and Tami and the BUs are going to figure out how we position it and how we market it. My job is to make sure the capacity, the reliability and the quality is going to be there for our customers. And I feel good that we're absolutely going to be able to do that.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Yes. That's a good point, obviously. Everyone talks about speed, but it seems like capacity and usage and -- that's clearly probably more of a differentiator than just being able to post multi-gigabit speeds that people don't need.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Or even -- I mean, they don't know. I use -- I only have 100 meg in my house only. It's -- and I've got 2 kids at home, and we're all in here during the pandemic. That was plenty fine, so...

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Do you see at all like a correlation between customers that take the higher speed offerings also have materially higher usage? Or is that -- how does that typically play out?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Not necessarily. I mean we see -- we're always looking at the usage patterns of our customers in Fios and in wireless and not necessarily. Certainly, there's certain segment of the population, they're heavy gamers or something and they tend to use a lot. And there's other folks that don't use much at all. So -- and it's across the board and it's basically a -- is probabilistic. It's a bell curve-type usage if you look through it.

But what I hope at some point is just, whatever you need, you have the ability to get and that's -- like water or electricity in your house, right? It's kind of the same thing. But we'll see. That's going to be more up to the marketing folks and the BU folks to see how they -- once we go more into this, how they position it in the marketplace.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

And as you look at the home broadband market today, where do you think you can have the most success in terms of geography? So obviously, millimeter wave is primarily an urban use case. But once you get to C-Band, you might have some more suburban cases over time or even maybe even slightly more rural.

Where do you see the most opportunity to have success? Because obviously, I think there's a perception at least that outside of the large cities, the home broadband market is much less competitive. There might be more opportunity to take share. How do you think about, geographically, where you're really looking to position this product?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Well, actually, we're going to -- we're positioning it to go all over. I think the opportunity is all over. I think there's opportunity in urban. I think there's opportunity in suburban and in rural. And I think a lot of people think mainly -- usually people are thinking rural more. We have evidence that supports that because we see people do use in some rural places, they use our network for more of their Internet access, and they don't even really have broadband. So there's going to be opportunity there.

But I think in urban areas, there's going to be, too. If we make it easy, compelling, give people a choice. A lot of people don't even really have that many choices, if you look throughout the United States. So we're going to be able to give people choice. It will be easy to use, easy to set up. Just like -- make it a situation like you're just buying a cell phone, frankly. So I think there's going to be things that we can bring to the table that are compelling, and it will be compelling across the board, not just in one geography, I think.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Sure. And do you think having, obviously, well over a decade of experience with Fios, fiber-to-the-home, does that give you a bit of an advantage in terms of how you market the product, understanding the consumer base when you look at kind of the fixed wireless broadband market? And then also having a material owned fiber footprint as well.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Absolutely. I mean I'm a big believer in my engineers' understanding and being able to characterize networks really well and understanding all the nuts and the bolts and how it all works together. And having been in the Fios game for a long time, we understand what works, what doesn't work, how to set things up and the customer support, all the different angles. So I do believe that having experience with Fios is absolutely going to translate over to what we do with 5G Home.

And that's all part of kind of the strategy, the Verizon 2.0 that Hans always talked about. Bringing all these out instead of working in silos like we kind of traditionally did, bringing all this stuff together, so you could take the best of all and learn and build the best product and have the best service for our customers. So it's absolutely helpful for us and something, I think, gives us a competitive advantage as we move forward.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

That's great. I'm going to shift now to mobile edge compute, which is another growth adjacency for you over the next couple of years. So at -- in March, you talked about a $10-plus billion addressable market opportunity for mobile edge compute by 2025. So where do you see the most opportunity between now and then? Is it kind of public model, what you're doing with, for instance, AWS Wavelength? Is it more on private dedicated solutions, so for instance, what you've done with Microsoft? Maybe you could talk about the different models and where you see the most opportunity for mobile edge compute.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. We're spending time on both. So we believe there's going to be opportunity in both. But the opportunity is different, right? So I think the public MEC is probably more B2B2C, more traditional type of things like applications. Maybe you start seeing the emergence -- because we are building this platform and bringing, what Hans calls, new currencies out there. You bring compute right to the edge. Now we have all this other spectrum available. You're building a platform that people could build new and exciting applications for, and you started seeing about AR/VR, C-V2X, vehicle stuff. So I think you'll start seeing things there.

But I'm pretty excited about what we do with private. So I think it's -- I think it's going to be very compelling for CIOs to have compute capability on their -- in their facility, whether it be a warehouse or a factory or even just admin space. And then you bring the capability of 5G with it, wireless, and you can run your factories, you can run your warehouses. You can do it securely. You have a ton of bandwidth. It's easy to manage. And you'll have a whole bunch of new -- once again, a platform that you can really use to increase efficiencies, do things a lot better in your supply chain.

We've been doing some testing with a couple of partners. And what they're able to do in their factory, if you will, they're saving a ton of money because they can see defects as soon as they happen, they're able to shut down their line and fix it. And then they're able to reconstitute. They're able to make their -- they're able to change their line like LEGO blocks, where before they used to have to run cables all over the place. And then that same network can be used for the admin functions in their computers and whatnot. So they're seeing a lot of value.

So I'm excited -- we're -- frankly, we're excited about both. There are both going to be different type use cases, we feel. But we think private MEC with 5G in the enterprise, is going to be a game changer for people. And we've been spending a lot of time, a lot of CIOs talking through it, and what it can mean for their business and how it can really transform how they do their business. So both early days in both of those, but we continue to work with our partners and press the tech and make a commercial success out of this over time.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

That's a very good overview. So Kyle, just 1 or 2 more questions for me before we wrap up. So one topic that gets talked about a lot in the industry is DISH is building this open RAN network. And I'm wondering, is there any opportunity for, call it, the incumbents such as yourselves to reap any cost advantages by using some of the functionalities of whether it's open RAN or kind of virtualizing the network core? Maybe you could talk about opportunities there that you see in the future.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

Yes. I mean we've been virtualizing our network functions for 10 years. So -- but -- and we have our own cloud. It's a private -- it's our Verizon Cloud platform, we call it, and that's -- it's our own cloud that we run our virtualized network functions on. And we've been doing it for a long time.

And actually, there's a bunch of benefits to it. It actually -- it's cheaper to run because, obviously, we don't have to buy PNF, we don't buy boxes anymore. We just buy the compute and we put the functions on. And you're able to -- just like in cloud for IT, you're able to scale it up and scale it down.

So when COVID hit, and we did see a lot of usage changes in the network, before we had a virtualized network, that might have been a little difficult for us. We might have had to move some things around and do a lot of physical work And then because we have a virtualized core, we were able to -- we were -- that was fungible, right? So we were able to move stuff around very easily and take that -- something that would have been hard before, now was easy to deal with. And that's only going to get better.

I get the question a lot, do we see Verizon going on in Azure, AWS or Google Cloud, we don't see that happening, at least in the near term. Because once again, I go back to, I want my engineers to be able to understand and characterize the whole network function from end to end and understand it well. Because that's how innovation comes, and then that's how we'll be able to put new and interesting things that can help our customers out. So we really need to understand it. So that's why we do our own. And -- but it's been great for us because it has saved us money and it's allowed us some more flexibility and fungibility. So I'm happy with the way we went there.

Open RAN, we support that. We were involved with the different standards bodies and committees there because we do think that could be a new way. A new model could emerge where maybe more players and more innovation can come from. So that's where -- so we get excited about that.

Obviously, I still have Ericsson, Samsung, Nokia, very important. I -- they continue to be and will be for a long, long, long time. But O-RAN does -- but it's interesting to us because it is a new way for maybe some new innovation to come into the game. And so we're always supportive of anything that will do that.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

That's great. Just one last quick one for me, Kyle. There's obviously another spectrum auction that's being contemplated for later this year in the 3.45 to 3.55 band. I know you can't talk about your potential bidding strategy, but is that -- as you look at that spectrum, is it something that could be interesting to pair with the C-Band spectrum you just bought? Or is there anything you could point out specifically about that spectrum?

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

I mean here's what I'd tell you on that, Eric. I don't -- we're evaluating it because there are some issues with that band. And they just -- they kind of just made it available. We've been evaluating with our partners. We -- I don't have a viewpoint right at the moment, to be honest with you. So we're still evaluating. We're trying to understand what the technical issues may be with that band. So I don't want to -- I wouldn't want to steer you one way or the other until we're kind of finished with our evaluation of it, what we're going to do. So that's where we're at with that one, really.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Fair enough. Well, I think we are out of time. So Kyle, really appreciate you taking some time to speak with us today. And we look forward to seeing your progress throughout the year. I know you're going to be very busy. Thanks again.

Kyle Malady - *Verizon Communications Inc. - Executive VP & CTO*

We certainly are. I appreciate it, Eric. Thanks.

Eric Luebchow - *Wells Fargo Securities, LLC, Research Division - Associate Analyst*

Take care.
