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# EDITED TRANSCRIPT

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## PRESENTATION

**Hans Vestberg** - *Verizon Communications Inc. - Chairman & CEO*

Hello, and welcome to the fall Sell-side Analyst Meeting. Great to have you all here. And first of all, it's the Veterans Day today. So anyone out there that have been serving, thank you so much for serving. It's a big day, and it's an important piece of our -- of work being here at Verizon working with the veterans -- working at Verizon.

So anyhow. Today, we're going to talk a little bit about where we are in our strategy execution. I have a couple of friends with me here on stage, but I will start by kicking off and going over a little bit what we have done and where we're heading. I'm going to use a couple of slides you've have seen before, but it's also important to see that how we're now executing towards our strategy.

We started some 2 years ago, what we call the Verizon 2.0 transformation. And one of the fundamentals of that was, of course, Network-as-a-Service. And we started with Intelligent Edge Network almost some 3 years ago, which is the base for our strategy. Then we have a couple of fundamentals around that, that we have been transforming to. First of all, putting the customer first with the changes we have done in go-to-market, but also the way we're addressing the markets. Secondly, a lot around the innovation. And of course, taking a lot of possibilities in 5G on top of that Network-as-a-Service. Then we have the other fundamentals that always has been in the genes of Verizon. That was the financial discipline. Our execution strength and actually to see that we have a strong balance sheet and a great cost efficiency.

And finally, we wanted to build this purpose-driven culture as well as a company. These were the 4 elements around our Networks-as-a-Service that we kicked off for more than 2 years ago. It came down to 5 different transformation streams, all the way from the network transformation, our new go-to-market and our new reporting, our brand transformation, our process transformation that we have done internally; and finally, our cultural transformation. We are somewhere in the middle of all of that, but we definitely can see that this is now the foundation for us that we see we can have our ambition, which is a GDP plus with a strong cash flow and earnings. That's our vision and our target going forward. And today, we're going to talk a little bit where we are on that.

On top of this strategy, of course, we outlined our 5G strategy. And I just want to reiterate, we want to build a Network-as-a-Service. We want to build 1 network with multiple business cases, all the way from the data center to the edge of the network, we have harmony. We have the same type of technology and products. We have come quite far in that. Some work still left, but a lot of efficiencies has been brought out. But more important, has created an opportunity for new businesses. And some of them, we see on this slide, the 3 different 5G use cases we have: 5G mobility, the 5G fixed wireless access and the 5G mobile edge compute. All of them we have been executing on for the last 2 years. And as I said, fairly recently, 5G just got real. We are in the moment of start executing and taking benefit from it.

And if you look back during this year and looking on our execution, all our execution has been based on that plan that we outlined 2 years ago with a network service, seeing that we think about the 4 stakeholders in our execution and taking part of the growth opportunity we see as a company. Ultimately, we came in February in our Investor Day, and we said this is what we're going to do in 2020. And we can just go over the list of things we committed to. And then we need to remember, this is a year that is unprecedented in all senses with the pandemic, with economical downturn, and we can look at the list, and I look at my team, we're basically executing on everything we said. We're on track when it comes to the 2.0 transformation. If that's from a customer point of view, the constant innovation that we want to do with new products.

And then when it comes to our 5G deployment, we are on plan or actually on target on all of them. We have done the DSS or the dynamic spectrum sharing, the nationwide 5G. I said all year along, we will launch it when it's commercially the right moment. And I think we all understood when that was. That was at the launch of the 5G phone from iPhone -- from Apple. So that was a very important moment for us. At the same time, we launched 55 cities on Ultra Wideband so far this year, and we are up to 60 before year-end. And that's, of course, the capacity and experience layers that we're building right now. And we are so pleased that the ecosystem is following us. And the last was, of course, that Apple in their 5G has Ultra Wideband in all of them, seeing the benefit of the experience and capacity layer we have built in Ultra Wideband.

We also said we're going to have 10 cities on 5G Home before year-end and a new CP that is coming -- that came out in October. We are on track for that as well. And finally, we said 10 mobile edge compute centers together with Amazon this year. Until just a couple of hours ago, we had 5. Now we have 7, and we have 3 to go, but we're on track for that as well. Building products and solutions that nobody else has in the world and actually leading the market.

Finally, when it comes to our financials. Despite the COVID impact, we have been performing very well this year. Based on our strength in our customer relationship, but also the network performance as well as our brand. And I will come back to the financials. Ultimately, we had also said we want to be a responsible business. And this year, we have made more commitments and more actions in that area than we've ever done before. If that is with climate or if it's with supporting small and medium businesses, we have done it at the same time as we have done the execution.

So if we look backwards, we have done everything we said since we rolled out Verizon 2.0. And if you look at the financials, first of all, important for us to see that our core business continue to be strong. One of those measurement is, of course, the service revenue, the wireless service revenue.

We have been constantly innovating in our customer interactions. If that is with partnership or our mix and match, that has actually paid off well. As you can see on this slide, we have been constantly growing our service revenue, except in the second quarter this year, which we had the impact of the COVID-19. Already in the third quarter we're back to growth. And as Matt said, on our third quarter earnings, we expect to be about 2% in the fourth quarter. So that's really an important growth piece of our strategy, continue with our core business, where we have the best 4G network in the nation. At the same time, building the opportunity in 5G.

Looking also at our earnings -- our EPS during the year compared to last year, after 9 months, we're basically flat. We're actually up \$0.01 compared to the previous year, 2019. The second quarter, of course, we had a huge impact on COVID-19. But now in the third quarter back. And as we did in

the third quarter, we updated our guidance. So now it's from 0% to plus 2% EPS growth compared to last year. So clearly, we are executing at the same time. We're doing everything from the network point of view, customer point view, brand point of view, our financials continue to be sound and strong.

Finally, on the cash flow, I can only say the team has done a tremendous work on the cash flow this year. As you can see, our cash flow growth after 9 months is quite astonishing, generating \$32.5 billion and actually seeing that we are putting our balance sheet in a very strong position. And as Matt and I have told you many times, we wanted to get back to the metrics or the financial metrics as we had pre-Vodafone. And we are in those areas right now. So a very good work on our treasury, but also on the cash generation from our business units. So this is creating a very good momentum for us going into 2021 with all of that.

I have talked quite a lot about the growth. We want to find the growth, and we have actually been seeing that in our service revenue. But I also outlined a couple of times both in the second quarter and the third quarter, talking about the different vectors of growth. The base for doing that is, of course, our Network-as-a-Service at scale that we've built right now, to see that we can build businesses on top of it that can add to that GDP-plus growth that we are looking for.

So let me talk through a couple of those vectors and where we are. These are the 5 vectors of growth that we have in front of us, and we are in the middle of execution on all of them. The 5G adoption, the network monetization, the next-generation business-to-business applications, the customer differentiation; and finally, new markets. Those are together with our core business that were growing are the growth generators we have in front of us. And let me go through them in one by one, what we're doing and what we have done so far.

If we start with the 5G adoption, I think you have seen it. We started building our 5G networks several years ago, all the way from the millimeter wave to the nationwide and so continue with the ecosystem. And one of the most important thing was, of course, on the mobility side, that we now have iPhone 5G with Ultra Wideband. That experience layer for us is a potential of growth right now, together with our nationwide.

We have also built a lot of partners in this area, all the way from the spot franchises that we're supporting and the applications that we're developing on 5G. All in all, this is creating a new opportunity for us. On top of that, we have the 5G Home coming in the 5G adoption that we now are launching -- have been launching that we're relaunching with the new CPE. That is giving us, all in all, new opportunities for growth. Ronan will talk later on how we continue to work with our customer to see that they can get benefits and enjoying the 5G as they are moving into it.

The second area of growth or vector of growth is the monetization of our network. We have long-term cable MVNO agreements, which are very important for us, and we have them as really great enterprise customers, both with Xfinity and Spectrum Mobile. And those, of course, are also helping us with the growth going forward. That, together with the 5G adoption, are 2 areas or vectors for growth.

If you then move into the third area, which, of course, the next-generation business-to-business application. Here, of course, we're relating a lot to the 5G mobile edge compute. And we started doing public 5G mobile edge compute together with Amazon and now 7 sites. And by year-end, 10 sites. And here, of course, is a market we're not even into today. We have opportunity to grow this and bring in revenues, and we build the network once. On top of that, we recently announced that we now have also an agreement with Microsoft to do the 5G mobile edge compute for the private sector.

And Tami and her team are constantly working with the leaders in different industries to create this new type of opportunities. This opportunity, we have talked about, will come in, in a meaningful way in 2022. But clearly, now is when we build it. We're a world leader in this area. We're the first in the world doing this. This is a great opportunity for us.

The fourth area is, of course, what we started with when we kicked off the unlimited. The way we're leading our customers, supporting our customers to get new benefits and new experiences. And as you've seen the last 8, 9 quarters, the unlimited is increasing. The premium unlimited is increasing, and we give them partnership all the way from the Disney+ to the Apple Music in a way to give them new experience together with 5G. So far, that model that Ronan and the team has built has really paid off. And I see that we have built a very resilient model with this customer differentiation. And on top of that, we are mix and match that is so far unparalleled in the market where we give our customer optionality that no one else can give.

Finally, we see new segments in the markets or new markets that we can address. We have already decided with Visible, Yahoo Mobile, the LTE Home Internet, that we are addressing new opportunities for growth. On top of that, we have announced that we are planning to acquire TracFone, which also gives us a very strong position in the value segment.

All in all, these 5 segments, on top of our core business is, of course, the base for us believing that we can do GDP-plus growth over time. And we are executing on all of these this year. And if you just go back and see what we have done in the last 2 years, this is what we're executing for, and this is what we have in front of us.

Finally, I just want to summarize where we stand as an industry and how we move into 2021. First of all, when it comes to the industry and the macro environment, we have to be clear that there are economical uncertainties in the market that we don't really know where they will go. I think that what is happening in our industry that mobility and broadband becomes even more important. Because for me, that's a 21st century infrastructure. And they're more important than ever today. And the reliability on it is also increasing even more, the importance of mobility and broadband. And that's where we are in a network service, with all this growth vector on top of it. I think we're well positioned there.

There is also the 5G sort of adoption happening right now. And the differentiation is going to be the ecosystem, how we have set up the ecosystem. My team, all the way from our technology team, our supply team, our partnering team, our commercial team has been working with ecosystem for years to see that we're going to continue to be the leader in this market. And of course, having a superior performance of our technology. So all in all, if I look where we stand moving into next year, we have a great momentum in our core business.

And I think we are in great shape when it comes to the 5G deployment and monetize the opportunities that we have outlined in our 5G strategy. I think also, we have the customer centricity we put in the Verizon 2.0 is so important for us in order to capitalize on all the investments we've done. And finally, we are sitting on a very strong balance sheet that we've built up over the years and actually been generating a lot of cash flow. So all in all, I feel good about moving into next year based on what we have outlined and where we are with execution. With all that, I'm going to hand over to Kyle to talk a little bit about the network.

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

Thank you, Hans. I appreciate you asking me to talk today, and it's great to be here with everybody. For those of you -- you don't know, my name is Kyle Malady. My team and I we're responsible for the engineering, design, maintenance of our networks. So I was with you, I guess, it was 9 months ago at Investor Day, and I spent a little time telling you about what we were going to do this year. I think I could characterize it as a year of execution, execution, execution. Four of these things that you see on the screen we talked about and one you didn't, and we'll get to that in a second.

But first and foremost, what we do, our brand promise. We continue to provide the highest quality, most reliable wireless service in the nation. And this year, it's never been more important for our customers with all the storms, with the social unrest, with COVID. People rely on us, and we've been there for them. So I'm very, very proud of the team and how we responded there.

We also promised everybody that we would launch 5G nationwide with DSS. We didn't give a time frame, as Hans said, but I'm very pleased that we launched that in October. And we are seeing really good results with that, which I'll share with you in a few minutes. We have lofty goals to deploy our 5G millimeter wave and expand our footprint. We have a really good story to tell there, and I'll get to that in a few minutes, even in the face of all the COVID and the headwinds that we've had, we've been able to execute on that. Once again, very proud of the team.

You'll see proof points about our maintaining our network leadership in 4G LTE and 5G, something we promised 9 months ago. And then one thing we didn't talk about was CBRS. We're very happy with the spectrum that we acquired in the auction. It's really going to give us some more capacity in our network and more ability to grow. So we're really happy with that. We'll get into that a bit, too. But at the bottom line, we're just executing to make sure we have superior performance. We've always had the best networks. We have the best networks today, and we will position ourselves to have the best networks tomorrow.

If you listen to any one of my speeches, I always talk about capacity because this is it. This is managing capacity, managing demand is extremely important. And we look at this every day and what we do. So what you see here is the chart you saw updated from beginning of the year. And you see that there's been an uptick in our capacity, which we've put in for different reasons. And then you could see the growth that we're still seeing. Now what's interesting here is COVID really shifted our usage patterns. Obviously, we look in different ways of how you cut the usage, right? So you have your urban, you have your suburban and you have your old core -- cohort -- forget, I can't say it.

So -- but then they all have different characteristics. What we saw is people moving out of urban and more into rural and suburban.

And therefore, we had to adjust our capacity a little bit. And you saw we upped our CapEx guidance a little bit in the beginning of the year, and you'll see in a minute what we did with the money. But our team was there. We understood what was going on. We were able to react when people needed us. And it was very important because we need to put capacity in for kids who are studying at school, for people who had to work at home, and for people who needed our service who didn't otherwise have broadband. So very important for us to react for our customers and we did.

And how are we able to do that? Well, we put on a lot of capacity. So we added a lot more 4G carriers than we had first planned to, and we added more CBRS. So we're able to get ahead of the shifting capacity and shifting demands in the network.

And the other point here is that it gave us the margin to launch DSS. If you remember when I talked about DSS, there's a slight inefficiency in the control plane to allow 4G and 5G to work together in the same spectrum. And we knew that. We understood exactly what it was. So we were adding. We're adding a little more capacity anyway. But now we're in really good shape, and you can see on the previous -- you saw in the previous slide, we're in the best shape we've ever been in terms of capacity overall in our network.

Now we put in some extra capacity, so we could put in this great technology called DSS. We, as engineers, are so excited about this just because the tech, but our customers really enjoy this, too, because it makes a very smooth and easy transition from one technology, 4G, to the future technology, 5G. There's a lot of hard-core tech that went into making this, and I got to thank a lot of our partners for helping us this. But there has always been a question about you're going to degrade your performance if you have 4G and 5G working in the same spectrum.

Well, here's some -- we have our own test. We do our own drive testing. We've been obviously designing this and building it and optimizing it for quite a while now. But here's some data that I was able to find from Ookla.

And as you can see, 5G-capable devices when we turned on DSS, they're actually performing better than they were when we just had 4G as the only technology in the spectrum. Now do we expect this will continue? No, because the design goal is we want the experience to be at parity with our world-class and best 4G network, right? So we don't want anybody going backwards because they're on the train for the future on 5G. So we're extremely pleased with where we are right now with DSS performance. In many cases, it works better than a 4G would. Most of the time, it's on par. And every once in a while, you get a little bit less. But on general, it's surpassing our expectations, and we're still optimizing. So over the coming months, you'll see new optimizations on DSS to make it work even better. But right now, we're thrilled with the performance.

Now we take that all in, and then we also look at, well, how we're doing. We can't take our eye off the ball of our superior network performance. I'm pleased to report that we continue to do very well in third-party measurements that measure all the competitors. We put DSS in, nationwide, very big deal. We continue to put millimeter wave in, and we continue to keep our eye on the ball, the best network in 4G, and that continues to pay off for our customers as they enjoy our network and they get the best performance out of any carrier in the United States.

One thing I'm really proud of. We set aggressive goals for ourselves in expanding our Ultra Wideband footprint in this year. Last year was the start. We started ramping up. And this chart is showing you the progress we made and how many sites we are turning on per month. You can see a significant, significant ramp here. And this is all being done while we have COVID going on and a lot of different things, it's headwinds, but the team has built a machine over the last 18 months that is allowing us to put out thousands of Ultra Wideband sites per month. In some cases, we're putting on several hundred Ultra Wideband sites per day, and we've built a machine to continue this going on. And what you'll see is we continue to ramp this up, put this network out there. More people will be able to enjoy the Ultra Wideband network as we continue to scale this thing out.

And as many of you know, 5G Ultra Wideband it enables unmatched performance. We have the fastest 5G Ultra Wideband network in the world as a result of the technology, as a result of the engineering, as a result of the technology and as a result of using millimeter wave as our carrying spectrum for this. We now have it, as Hans said, in 55 cities, and that's up from 31 last year. We are definitely on track for 60 Ultra Wideband cities this year. What we've done, and you'll see this in the next slide is we've targeted areas, obviously, with -- that have the most usage. So we are seeing a good uplift in our capacity perspective where we've put this in. We're seeing real-world speeds of up to 4 gigabits a second on a mobile phone. It's incredible. We've done in labs under perfect conditions, we've done up to 5 gigabits. But that's going to grow because as we're able to put more carriers on and do more carrier ag, we see ourselves getting up above -- well up above 5 gigabits a second.

The usage that we're seeing, while still small because you need devices in there. We continue to grow our footprint, but we are up over 4x than we were last year. And the benefits that we see from scale and the cost benefits that we get, we will start seeing the improvement in the capital efficiency per bit as people start using this, and the iPhone 12 gets traction, and we start seeing more people come on to the network.

Now Hans talks a lot about Network-as-a-Service. And as engineers, our role is to how do we drive efficiency in our overall network, right? And what you see right here is basically a normal curve. On the left side is the number of cells. And on the bottom, it's the utilization per each cell. So on the left side, these are cell sites that might have low peak utilization. So they're not very busy, okay? And on the right, we have the cell sites that are high peak utilization. So we look at this curve. It's not exactly the right curve. It's actually not exactly normal. It's a little bit binomial and so forth. But just for explanation purposes, here's how we think about the network and how we're monetizing it.

On the right side, in the areas of highest utilization, that's where we're starting our focus on Ultra Wideband, all right? It gives us -- it's where the people are, it's where the density is. It's where I need capacity. It's where people can experience these great, great capabilities. And it also opens up new businesses for us in that home because I have so much capacity, I can support the mobility, and I can also support a service as fixed wireless access using Ultra Wideband. So that's how we think of that side of the curve.

On the other side of the curve is an opportunity for us that we haven't taken advantage of until this year. In these areas that have low peak utilization in 4G we can actually offer a fixed wireless access service for people who need it because there's latent spare capacity here. So it's a great way to fill up these areas that otherwise would just -- no usage would be on them. If we can sell them to -- if we can sell the service and fill this up, I drive more utilization, more benefit, more efficiencies. Then when we think about, we added a lot of carriers. We've won. We've done very well with CBRS, and we're rolling that out. Then what happens is all this additional capacity we bring just kind of moves the whole curve over to the left, which means more opportunity for us going forward. So once again, it comes down to capacity, it comes down to managing your spectrum efficiently, it comes down to bringing new technologies that will really benefit our customers and help us move forward as a business.

Now we're not done with Ultra Wideband. We're only at the beginning. There is a decade-plus of this technology, and we are just starting. Just like when we started LTE, there was many things, many technologies, many capabilities that we didn't see right away. There's a lot of things here and Ronan will talk about what we're doing with 5G Home and what we're doing with the CPE and the chip sets.

You guys know we're working on our stand-alone core. We're going to be able to go way over 5 gigabits a second. We're going to network slicing. The 1 -- the 2 things that I'm really excited about right now that we're really knee-deep in is 5G in-building and MEC. And we believe pairing those 2 up and bringing those into the enterprise space for Tami's group is going to be a game changer and change the way CIOs and people think about running their enterprises, whether it be a factory, whether it be a corporate campus, or whether it just be regular IT capabilities.

The way the technology rolls out as you start in the macro, and then we start getting in-building solutions. We are testing in-building solutions. We have many vendors working on it in different parts of the United States at the moment. And we're really excited about what the capabilities of in-building and Ultra Wideband bring along with MEC that Hans talked about and our partners there. A lot of great applications that people would be able to take advantage of. So we're just at the beginning, and I'm super cited as a technologist and as an engineer for what we're going to be doing.

Now in summary, this is all part of our overall strategy as Network-as-a-Service. We start with 4G LTE, which we have the best, broadest network. Then we add on 5G DSS nationwide capability that allows our customers and allows us to transition to a new technology very, very efficiently, unlike what we've ever been able to do in the past. And then we add on the super capabilities and actually the game-changing capabilities that

5G Ultra Wideband brings, and we call this 5G built right. So we have the best-in-class, most reliable network. Like I said, yesterday, today, and we're making the investments and putting the technology in that will maintain leadership well into the future. So I appreciate your time. And with that, I'm going to pass it over to Ronan Dunne.

(presentation)

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Good afternoon, everybody, and thank you, Kyle, for setting up for me. Internally, we say Kyle builds stuff and then Tami and I, sell stuff. So let me tell you a little bit about what we're doing to sell the great network we have. I want to start by just reminding you that the model -- the platform that we've created, which is our growth platform, and it's really built around leveraging scale and think about these scale core platforms as being available to both our consumer business and to our B2B business. Really built around our network, but also the capabilities of our distribution, which is shared between our 2 business and consumer businesses and then service and billing as platforms.

The key to those is they're all scale capabilities. The more we put through them, the more efficient they get, a bit like the network itself.

But to be able to activate those, to be able to actually create real opportunity out of those. What we need to do is we need to add this platform layer on top, which is our intelligence layer, which allows us to make actionable opportunities, which we can then use to very, very effectively and efficiently target different segmented opportunities in the marketplace. This is really where the brain is that allows us to be highly efficient, highly targeted and highly effective in our go-to-market.

Our go-to-market itself, we have expanded, recognizing the benefit of being able to put greater throughput through our scale core platform assets. So whether it be our core Verizon branded business, our Visible and Yahoo Mobile businesses or through our partnerships in the wholesale area with Comcast and Charter, which I'll talk to later. And with the opportunity for us to access directly into the value segment with our proposed acquisition of TracFone. And then what we've done is we've used that same intelligence layer to allow us to improve the proposition that we offer and the value of that to our customers through a combination of a modular proposition platform, which is a mix and match, which is now available not just to our wireless consumer customers, but to our wireless small business customers and also our wireline consumer customers and increasingly expanding the value that's available to our customers there. And therefore, both the stickiness and the experiential value that will deliver on the capabilities of the new technologies we're building in 5G.

So let me bring it down to say, okay, how are we accelerating that in the execution for our plans in 2021 and beyond. And key to that, of course, is going through the engagement adoption and monetization phases for 5G. As Kyle said, we now have our 5G nationwide service, and we're really, really pleased with that, which complements the best-in-class 5G ultra-wideband network. Then this modular approach to proposition is allowing us to bring more value to our customers with signature experiences that are encouraging our customers to take more of what they want from Verizon while also giving us the opportunity to expand into new product sets like the home and also in the business case into office, and also to drive more value for customers by going into new segments like the value segment itself and serving other opportunities through our wholesale relationships. So these represent the vectors to accelerate our growth.

And fundamentally, what they do is they allow us to leverage the core and the core relationships we have as the foundation of growth and then to complement and amplify the growth opportunities within the new segment opportunities and the new product opportunities that come with it. So let's go down into that core opportunity and how we're driving growth from the core.

So the first thing to remind everyone is we have now refreshed the entire value proposition from prepay to right across the postpay business in wireless and wireline, but also through our connected devices. So a full refresh of the value proposition built around quality, choice and experience.

To do that, we have expanded our partnership arrangements with partners like Apple, Disney and more to come in that space, as we ensure that more of what our customers truly value is available to them. And when I talk about platforms and scale, think all about -- also about our scale and our partnerships, where our purchasing scale and our distribution scale adds value both to our partners and, therefore, ultimately, to our customers.



So where does that drive through the P&L? Well, it's through new accounts, it's through the mix of unlimited, but it's also through the premium mix, and we'll talk a little bit more about that in a minute. I talked about the efficiency, that intelligence layer that we have that sits above our platform layer. The really important thing is that we are getting better and better, and I think we are now best-in-class in the highly cost-effective targeting of opportunities in the market. That's allowing us to take those scale platforms and drive personalized opportunities to our customers and deliver a consistent omnichannel experience, which is driving up a better NPS and a better customer outcome. It's also that same omnichannel capability and deep customer insight that's allowing us to target effectively our customers with new products and services and to reward them for their loyalty. And the important relationship here between the credit card and Verizon Up is creating this Verizon dollars currency, which actually creates more value for the broader relationship that our customers have with us. And that drives key metrics, stickiness and lower churn, but also step-ups and additional lines and taking additional products. Fundamentally, we're a subscription business. So we're taking share of engagement and expanding out the opportunity set with our customers.

And how are we doing that? Well, we've worked really hard to make sure that we seed the market with the best quality devices that can exploit the incredible capability that we're bringing with 5G. And it's no accident that all the premium product in the marketplace now, over 20 devices is what we committed to at the beginning of the year are all supporting not just our 5G nationwide, but 5G Ultra Wideband. Couple that with the new experiences that we're showcasing with these devices, whether it be gaming, whether it be some of the stuff that we're doing, sports and entertainment, really bringing the possibilities of 5G to life. But also bringing us into new opportunities as we expand into the home and other areas that allow us to build out our product portfolio and grow our share of engagement and share of wallet with those customers to deliver new revenues and increased penetration.

So let me just go a little bit deeper and say, "Okay, so how does that drive the economics of the base?" Well, the first and most important thing is we're driving a significant shift to unlimited. And that's the first kicker within the ARPU story. And what you see is continued growth with our unlimited plans now more than 60% of the base. And then the second driver within that is, once we get our customers into unlimited, we have the opportunity to continue to offer them incremental value as they step up the tiers and they expand the product set that's available to them.

And remember, again, all on a single modular proposition platform of mix and match that now spreads across wireless and wireline. But then when you take the right-hand side of the chart, what we have is the opportunity, both with new customers and with the base. And what you'll see is, in the third quarter, we were driving 88% of the new accounts that were coming in were choosing to go on unlimited. And 58% of those unlimited were choosing to go on a premium plan. So that's an indicator of the value of the proposition is being recognized by consumers in the marketplace. So more of them are coming to us and taking those unlimited and premium plans. And that same attractiveness is driving the base acceleration as we see the step-up ratio going from -- up by 31% between the third quarter of 2019 and the third quarter of 2020, which is driving an acceleration of 12% in the year-over-year step-up revenue driver, as measured by monthly recurring charges. So that's the model that is driving the real accelerated value proposition inside the base and is the core for our confidence around our growth of our service revenues.

So I then go deep into the home experience. Sometimes, I think when we talk about this, people think just simply fixed wireless access, tell me a bit more about that. I want you to set the context, though, for this is. It's an integral part of a sophisticated modular mix and match approach that our customers increasingly both understand and enjoy the benefits of so we're building mix and match out on Fios. And what is that doing? It's actually increasing the premium take inside the Fios footprint as well, more of our customers taking a gig speed proposition. And we recognized that we had previously a very strong connectivity business with maybe a lower value content business on top, but the scale of our wireless business is improving the proposition from a content point of view, creating more choice for our customers and allowing us to take the wireless scale and add additional benefit to those Fios customers. So that is allowing us to grow our Fios margin. You will have seen in our Q3 results, the strongest performance in Fios for about 5 years.

But what's really important there is that is giving us the opportunity to bring more customers together. And that same proposition is what will support all aspects of our home offering as I go into that in a bit more detail, whether it be 4G, LTE, 5G Home or Fios itself. So all of those superior performance and superior choice is also meaning that our customers are getting more benefit for taking more of their services when they take mobile and home from Verizon. And that allows us to open up more opportunities. You know how successful we've been in Total Mobile Protection, but we now have more access to the opportunity to sell VZ Protect, home and premium content partnerships. So that modular approach that's working so well in wireless and you see is the foundation for our ambition inside the home environment. And many of these aspects are also available from a product point of view inside the office environment as well.

So when I take that and look at our home expansion, it's not just simply about our 5G home, but that's a great opportunity, but we're now in 48 states and over 4,000 cities for our 4G LTE. And this is picking up on what Kyle explained is, we're selling spare capacity and increasingly, the efficiency of our model will mean that opportunity will expand, while at the same time, on the other side of this bell curve, you see the growth out of the Ultra Wideband is also growing my 5G Home opportunity.

So when I pull that together, I have this very, very coherent proposition that's attractive to customers and my opportunity set is expanding as I build 4G home, I build out Fios, and I build my 5G fixed wireless access opportunities as well.

As Hans mentioned, we have enhanced the 5G Home opportunity with the deployment of the high-powered CPE. And we're seeing very strong performance on that and starting to be written up externally. And that's what's giving us this very strong platform for a broadened and expanded home opportunity which not only gives us new addressable market, but actually increases the stickiness and engagement of our wireless customers. To give you an idea on the 5G Home footprint, 50% of the customers who are taking that product are existing wireless customers. But the other 50% are new target opportunities for us to expand our wireless business after they come and see the value of 5G Home.

So if I pull all the pieces together, we have strong growth in the core itself. We have a modular structure that is attractive to our customers increasingly. It allows us to expand the opportunity set we offer to them in a way that's reassuring and understood to them because it's based on quality, choice and experience. And as we open up new opportunities with 5G, we're able to layer those incremental growth opportunities on top. That's what gives us the confidence to develop a plan that will develop to GDP-plus growth because of that strength in the core and the incremental opportunity set that's coming through. And what we're seeing is the quality of our customer experience is giving us the right to offer more products and services to customers. And as we see the build-out of the 5G network, we increasingly have opportunities to further embed the relationship with customers and to further accelerate that growth pattern. So strong foundations that will give growth in 2021 and a modular structure that leverages those key scale platforms that will increase and expand that opportunity as we go forward.

Within all of that, we have our direct-to-the-market opportunities, but we also have a deepened and expanded opportunity in our relationship with the MSOs, where we now have expanded and extended that relationship to give them the opportunity to enjoy the incremental technological advancement that's going on in our network and allowing us to ensure that we're the primary provider for them for the foreseeable future. So when you pull all those pieces together, that's what gives me great confidence about our ability to deliver superior growth in the coming years. With that, let me hand it back to Hans.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Thank you, Ronan, and thank you, Kyle, for those presentations. Before we go into the Q&A, a couple of things. First of all, I have a couple of the other leaders from our leadership team as well. We have Tami from the Verizon Business Group. We have Guru from Verizon Media Group here, and we have Matt here and some other key -- my key leaders as well when it comes to Q&A.

Secondly, there are a couple of things we will not talk about. We are in a silent period regarding the C-band auction and the order of auction, so we cannot comment on that. So I ask you, don't ask any questions on it. It makes it easier for us. And finally, when it comes to financial guidance for 2021, we will continue with our normal process. Matt and I will do that when we come out with Q4. So just we're clear on that, when we kick off the Q&A here. So by that, I hand it over to Brady to start.

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## QUESTIONS AND ANSWERS

**Brady Connor** - Verizon Communications Inc. - SVP of IR

Great. So we're going to go into Q&A. It's in a virtual environment. So we're going to start with Brett Feldman from Goldman Sachs, and I get to play operator today, which is fun.

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**Brett Feldman** - Goldman Sachs Group, Inc., Research Division - Equity Analyst

So when we look at the iPhone 12 promo that you rolled out a couple of weeks ago and as well as the promos that your competitors rolled out a couple of weeks ago, obviously, a lot of discussion around the extent to which they're aggressive or not aggressive. But I think another way of looking at this is it's the first time since lockdowns that you and all of your competitors have really approached the market in a normal way. Meaning we would typically expect this time of year that you'd be promotional, that around a device launch that you'd be promotional. So the question is, with the industry approaching the market in a normal way, have consumers responded in the normal way? In other words, are we starting to see gross adds move back to normal levels? Are we starting to see churn and upgrades move back to normal levels? Or do we still have a little bit of a way to go here?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Brett, I think that's a good question for Ronan to answer. Ronan?

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Thanks for the question, Brett. So I think the answer to say is, yes, it's fair to say that the shape of October was different because of the timing year-over-year, so we saw the switcher pool down. But just to give you a context, in our Android ecosystem of about 50% of the phones we were selling were 5G at the end of Q3. So the arrival of iOS into the market was already leaning into a momentum and a demand and an appetite that was there. And so we've been very pleased with the response to not just the promotions, but to the product itself. As a significant portion of our base, essentially 2/3 is iOS.

And the thing I would highlight to you is within that overall environment is the model, the modular structure around the proposition that I showed you, means that we have the opportunity for every one of our upgrades to be an ARPU accretive transaction as well as every acquisition or add a line. So in that context, we're very well positioned to participate in the activity in the market. And for all of that to be built an accelerant of 5G adoption, which is really important for us as the best-in-class in that market. But secondly, also to drive accretion as we drive step-ups as well. So we've been very pleased with the response we've seen and very excited to continue to deliver a superior experience on 5G.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

And we add there, Ronan, on that the Max and -- not the mini, I think it's mini -- they went on order just a couple of days ago.

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Yes. And what I would say to you is, from a mix point of view, I think the Max, certainly, in our experience, has probably been the biggest hit. And so again, very, very pleased with the response to that. So all I would say is, I think Brady and I talk about, am I pleased? Or am I very pleased? And I think it's fair to say I'm very pleased.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

(Operator Instructions)

Next up is Phil Cusick from JPMorgan.

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**Philip Cusick** - *JPMorgan Chase & Co, Research Division - MD and Senior Analyst*

Just talk about the GDP-plus goal of the company. We were -- is that a wireless only? Or is that for the whole company overall? And is that for something that could happen in 2021? Do you think COVID continues to drag you? And then second for Matt, if I can, you've talked about leverage. You've gotten to your target after a few years. If you do spend more -- or if that goes up because you spend some money on spectrum, what's the plan for getting that back down over time? Do you need to get back to that target leverage before you think about returning capital?

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**Hans Vestberg** - *Verizon Communications Inc. - Chairman & CEO*

So on the GDP-plus, that's the whole company. And that's the North Star that we outlined when we started our transformation for 2 years ago. And as we show today, it was built on Network-as-a-Service, the core business and then, of course, the vectors of growth that we're showing today. There are some headwinds in our business. Of course, with the wireline business in certain areas, it's actually contracting. So we have to counter for that. But all in all, this is an ambition and target for the whole company growth. We will come back to the guidance for 2021. But clearly, you can see right now that many of these vectors were in the middle of the execution. They are there. They are not more a PowerPoint slide.

If you take all 5 of them, in many of them we're in middle of the execution of them. So that's why I'm pushing my team to really get into growth in these areas. And I'm pleased to see that everything we decided, despite the COVID and despite the situation in the market, we're actually executing well. So as I said, I look forward to 2021. I look forward to the fourth quarter as well. But I look forward to 2021 when we have all these pieces together, and can really show the market that this is our growth vectors. And they will gradually come some of them, and some of them are already there. Matt?

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**Matt Ellis** - *Verizon Communications Inc. - Executive VP & CFO*

Yes. Thanks for the question, Phil. So certainly, as we've been talking about now for -- it seems a long time, but we're now less than a month away from the start of the auction. Obviously, we're not going to talk about specifically what's in there. But as we said earlier in the year, once we had a start date, we'd come back and talk about the capital allocation in more detail after the auction. But certainly, as you think about our capital allocation priorities. The first one is to invest in the business. That's the best priority for cash for us. And then once we've done that, if we go outside of our leverage target range, our plan would then be to work our way back into the leverage target range. So -- but certainly look forward to providing an update on capital allocation when the auction is over.

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**Brady Connor** - *Verizon Communications Inc. - SVP of IR*

Okay. Next, we're going to go to Simon Flannery from Morgan Stanley.

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**Simon Flannery** - *Morgan Stanley, Research Division - MD*

Great. Kyle, maybe you can talk a little bit about some of the early learnings from the relaunch of 5G Home? Obviously, you were looking for a lot more self install. You were looking for better propagation from the nodes. So what are you seeing in terms of that? And I think question we really want, you talked about scaling it nationally, getting to millions combined with the LTE, but help us think again about that path to 30 million households over time? And when does this -- I think, Hans, you talked about business really scaling in '22. So are we going to see this scaling in '21?

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

So I'll start with it, and I hit the first part of your question, then I'll probably hand over to Ronan and Hans for some other stuff.

Yes, we've been -- as Ronan talked about, the high-power CPE, that's -- we're really happy with that. That adds a nice little boost to what we had before and when we were learning with TF. It's just a -- it's a better chip. It's more robust and it adds enough DB that we get a lot better coverage, a lot better performance. So we're happy with that.

The other good thing about it is the teams have done great work in the self-install piece. So we have applications that customers can use to find the right spot in their home to place it. We have other ancillary things that we're doing to make it easier for them. So we expect a much easier adoption on the self-install front. In terms of the millions of people or homes or -- I showed a slide a couple of years ago that we're going to bring all of our spectrum to bear to cover people for fixed wireless access. You heard Ronan talk about Fios. Fantastic product, best-in-class. Now we're talking about 5G fixed wireless access. And now we're adding 4G fixed access to the product, too. But specifically on 5G fixed wireless, right now, our plans are, we are focusing on the dense areas. And that we focus on those dense areas and the great capabilities that people will be able to enjoy, and we just are expanding as quick as we can. And so we could just bring more and more people on. So it's work in progress. We keep rolling. And we keep adding people to the possibilities as we go. With that, I'll hand it over to Ronan for the rest of that.

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Simon, I'll just add a couple of things. What we're seeing with the new high-powered CPE, that 70% of the people who try our self-install are completely successful without any assistance from a third-party of any kind. And that's because not only is the CPE better, but the tools are better. Just to give you a data point, we're now seeing more like 700 gigs utilization. And although we say kind of 300 meg plus, we're seeing average throughput speeds of 1 gig and that's a factor of the improvement with the carrier ag as well. And we're also seeing that installed times, we're seeing as low as 40 minutes installed time for the 5G fixed wireless access. And also, I have to say with the 4G LTE product, we're seeing really interesting usage at about half what we're seeing in gigabits from the 5G Ultra Wideband, but we're actually seeing 4G LTE install times of 5 minutes So really good customer experience.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Thank you, Ronan. And Simon, just to add on that. I mean we -- I think we are really pleased with the technology and the ambition and the vision we had from the beginning with self-install, a total unique and transformative solution. And one thing that we haven't talked so much about, but over time, also another opportunity is, of course, the fixed wireless access for our businesses and small and medium businesses because this is a product that it's not only for 5G Home. It could also be for -- and wherever we are building millimeter wave, of course, we're going to expand this out.

The reason why we have 10 cities as ambition right now. We need a cohort that is big enough to start marketing. But ultimately, everywhere and every city we have millimeter wave is a 5G Home or 5G fixed wireless access city. And I'm really happy how we have been so dedicated on self-install, making this transformative. And of course, the new CPE is just meaning that we can add much more subscribers to the same base station because that was the sort of the limitation with the previous generation. So all in all is great. But as Kyle said, on the 5G Home or 5G fixed wireless access, we start in the most dense areas because of capacity and the super experience we're giving. So then we just build it out. We -- I'm excited over it, and I think we're doing absolutely the right thing. We are just doing this different again. We're doing it transformative.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

Okay. Next, we're going to go to Colby Synesael from Cowen.

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**Colby Synesael** - Cowen and Company, LLC, Research Division - MD & Senior Research Analyst

Two questions, if I might. The first one for Kyle. In the chart that you showed regarding 5G and the improvement you see in the network speeds since you launched, I guess, a few weeks ago, it didn't seem like that big of a change relative to what you're seeing with the 4G network, curious what needs to happen for that to be a faster -- a bigger improvement? And also what's the timing around when we might see that? I think when I

look back at some of the standards for 5G, the expectation was for -- from north of 100 megabit per second speeds versus, I guess, today, what I would consider more traditional average broadband speeds for 4G and maybe 40 or 50 meg? And then secondly, as it relates to MEC in 5G Home, the company has talked about over time how we start to see the revenue start to materialize in 2021 and then become more meaningful in 2022. And Hans, on the third quarter call, you said something similar when do -- should we expect to start seeing that revenue reported and you're giving us some of those metrics so that we could kind of independently see that for ourselves?

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

So I'll start with the DSS. Yes, so that slide I showed there, Colby. So remember, that's aggregated data. That's through Ookla. And while it's a little higher than typical 4G. And I think the reason for that is there's not a ton of devices out there yet. So what's happening is people are using it. And when the fundamental technology of sharing the bits in the control plane and the spectrum, there's more 4G people on there than the 5G person. So therefore, they're getting a little bit better service. But in terms of it working, it's doing what we want. We want to have people to basically have a very good experience just like they're used to and not degrade. So it will get better over time. But it's largely dependent on the bandwidth you have. So you said 100 megabits a second. You go around on our footprint right now, you see that quite often in LTE. What we didn't want to have happen is you get a 5G phone and all of a sudden, you're getting 60 that would be terrible.

So we want to have -- the baseline is it's the same, and sometimes it's going to be better. And then over time, we'll bring new technologies to it. It will get better and better and better. But it's not going to be as good as Ultra Wideband. I have 1,500 megahertz plus of spectrum there. It's not going to be as good. So that's why that's the game changer. We focus on that, but we're focused on the performance of 5G. And we're just in the early days of it. So it'll get better and better and better. We got -- we do have some improvements that we see. So and then?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes. And I can only say our engineering team is conservative all the time, and that's when I look at it right now, I mean, we are on par or better with our DSS than we are on our 4G network. That was never our conversation from the beginning, but that is how our team can actually do better than any other carrier in the world with the performance. And as you might have seen, all these nationwide comparison right now. I mean, the early ones you have seen, I mean, we are best on that one as well already. And we are just in the start of it. So I have a lot of confidence in the team when it comes to our nationwide that we launched just a couple of weeks ago, and you saw we already have improved. So I think they're doing great work.

When it comes to the 5G mobile edge compute and 5G Home. So what we have said, meaningful sort of revenues coming in -- for 5G Home or fixed wireless access in 2021 and 2022 for mobile edge compute. They will, of course, be embedded in our units and over time, as Ronan explained, some of it like 5G adoptions and all of that, they will just straight come into his way of working as a core business over time. We will, of course, start when we feel it's the right time to give some statistics around it, but maybe I can ask Tami to make a couple of comments where we are on 5G mobile edge compute. Because you don't turn that on from 0 to 1. It's a big work we're doing with a lot of enterprises. So Tami?

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**Tami Erwin** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Business Group

Yes. Thank you very much. And listen, when we think about mobile edge compute and the time line to when we begin to scale revenues, we've talked very consistently about that being 2022. But what we are doing is building, scaling the ecosystem of how do we take 5G, not as a sprint, but a marathon. And I think you'll see us begin to lay down those ground markers for how we've done that.

A year ago, we announced our partnership with AWS for what we would do with mobile edge compute. We didn't just announce the partnership, we actually showcased several applications with them that were up and operational. What I love about that is it's the public MEC, so we've opened up to 1 million developers around the world to begin to develop on edge compute capability with latency that's sub-10 milliseconds. So very, very exciting as we think about what's possible. You then fast forward to this year where we launched 5 commercial sites. And then 2 more today, Dallas and Miami. So real-time update those launched this afternoon. So we're now at 7 site locations. And on track to deliver the 10 site locations by end of year.

In addition, as you heard Hans talk about, we announced our partnership for private MEC with Microsoft and our ability to really scale out as enterprises reimagine in a post-COVID environment their world, how they think about private networks, how they think about private edge compute. We're beginning to really have a very robust funnel of what our customers expect to deliver in terms of transformation, and they view edge compute capability being a key part of what they do. And how they do it. And so we're on track from a technical standpoint. Our funnels are full, and we are consistent about revenues in 2022.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Thank you, Tami. Matt, some comments there maybe from the question from Colby.

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**Matt Ellis** - Verizon Communications Inc. - Executive VP & CFO

Yes. Just maybe, Colby, following up on the reporting piece. So as you heard Tami say, we expect when the MEC revenues will start showing up. And then as we start seeing the impact show up on fixed wireless access next year, we'll start to have some -- we'll show the numbers there when they're material and starting to come through. So as that starts to come through in '21, the B2B side in '22, we'll have more to share with everyone at that time.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

All right. So next, we're going to go to Dave Barden, Bank of America.

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**David Barden** - BofA Merrill Lynch, Research Division - MD

I guess my first one would be for Kyle. You showed a slide with black and red bars, demonstrating expansion of the 5G Ultra Wideband and with no y-axis. I think that given you guys are advertising this as the key differentiator between Verizon and everyone else, it would be hugely helpful for people to understand what those bars really mean in terms of addressable market, addressable population coverage? What does 5G Ultra Wideband really deliver for Verizon today? And I guess the second question is -- and maybe this goes back to the prior question is, you guys have a target for revenue contribution from the 5G network that you think will be visible in the financial statements by 2022. Is that going to be purely enterprise? Will it be partially consumer? And if it is consumer, how will that look?

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

Well, I guess I'll start, David, I think your first thing there isn't the question. I think it's a comment, so -- or a request. So we'll have to probably come back to that. But I mean, that is discrete data that I showed you there. I mean that is our ramp in terms of number of nodes that we are building and we're putting on the air and integrating into the network, month after month. I think my idea there was just to show you that even time of pandemic here, we're building a factory that's going to pump these things out and is really going to accelerate putting these things out there. As you can imagine, right now in COVID, it's not exactly easy to get a permit to do anything. So the team is overcoming that and we continue to accelerate our growth, and that's going to continue.

In terms of providing other data, I'm going to look to my buddy Brady over here and ask him to take that on advice and see what we can do.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

Yes. Yes. Well we'll take it under advisement and come back at the appropriate time, Dave. But I appreciate you asking, for sure.

**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes, and David, I think the most important for us and what will come back, we build this where people usually live, play and work. That's where we're building capacity. This is super experience with Ultra Wideband. As I said, we are on track to do 5x more small cells on 5G Ultra Wideband this year compared to last year, and we continue that journey and even in this time. So we think we are in meaningful sort of capacity areas where actually this is used. So I think that's important.

The second question was where we will see this show up? I think Ronan actually explained that this will show up as he is working with his unlimited premium and so on. So whatever 5G subscribers coming in, it will show up in his service revenue going in. That's the model that Ronan and his team has worked in. And Tami as well as, of course, it can be 5G subscribers coming into her. That will also be in the service revenue.

Then, of course, the 5G mobile edge compute will be later on, as we said. So you will see them showing up in our P&L over the year. And especially when it comes to Ronan, that's part of his -- I call it the ladder of taking customers on the whole journey of getting more experience and more benefits moving up to unlimited and premium unlimited. Do you agree, Ronan?

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Yes. So -- and maybe I didn't make it as clear as I should have done on the slide, but one of the things that the -- is one of the premium components for people to go to the higher tiers in unlimited, is, of course, things like Apple Music, Disney and other things, but it's access to 5G Ultra Wideband in those higher tiers where 5G nationwide is available across all of the tiers. And what we're seeing is that increasingly, more and more of our customers as we build out -- if you think about it, if we're building where the traffic is, then actually, what happens is that's because more of our customers use those areas. And therefore, surprise, surprise, more of those customers get the benefit of where we're building the 5G Ultra Wideband. And it's true to say that they won't be seeing it in 100% of the footprint they use on a daily basis, but that was never the plan. But any customer who's using any of the areas that are high-traffic areas gets the benefit of the 5G Ultra Wideband being built.

That coupled with areas like transport hubs and termini and other things, means that the experience of 5G Ultra Wideband is that I walk across the concourse in an airport or in a bus station or a train station, and I download 10 gigs of data so that I can consume 4K streaming as I go on my journey.

So there's a lot of the use cases that are consistent with enhancing everyday experiences of a wide number of customers as opposed to because what we said is the capacity and experiential layer, not a coverage layer.

And so I think our customers increasingly understand that, and that's what enhances the ability of us to deliver a high-quality experience to our customers wherever they are.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

And important add to that how we have worked with ecosystem all the way from the infrastructure, when that's how we build the network with a handset and chipset manufacturer to be where we are today. And this is just the beginning. But this plan started several years ago on a clear strategy that we had in order to create a superior experience on 5G. We want to do a transformative. But on top of that, we have our 5 nationwide as well right now.

So I think we're really taking the best out of our engineers to create opportunities, both for Tami and for Ronan, but also mentioning that our Verizon Media Group is very much involved in all of these.

If you think about some of the applications we have developed with NFL, for example, the 5 screens that we have from the stadiums, that is developed in our Verizon Media Group. So everybody in the company is rallied around these growth sectors or vectors, I should say, that we're executing right now. So it's -- again, I -- just to go back to, we were very clear on our strategy, where we wanted to play and how we want to execute



and how we want to have the best network, the best distribution and the best brand, and that's what we're continuing right now. So I feel that we're in a good situation, and I like our assets. I like our assets really much.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

Okay. Next, we're going to go to John Hodulik from UBS.

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**John Hodulik** - UBS Investment Bank, Research Division - MD, Sector Head of the United States Communications Group and Telco & Pay TV Analyst

Okay. Great. Maybe a couple of follow-ups. First, maybe it's for Ronan or Matt. The 88% now taking unlimited, obviously, is a big number, given that you guys were at 50% for so long in terms of penetration. What's the average ARPU lift as you go from metered to unlimited, and then maybe to that high end unlimited? That's number one. And then number two, on the prepaid. For a number of years, you guys participated in the prepaid market, basically through wholesale. Obviously, big change in strategy with TracFone. Why the change? And that company has been growing service revenue sort of 1% to 2% for the last few years. Any chance you guys can bring all the Verizon resources to bear and accelerate that number?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

So I will start, and then I will ask. And first of all, I want to give a big shout out to the team that build the model that we've done with unlimited over the years and how they have been working with new additional partners, values and all the way. And this is nothing you do in 2 minutes. I -- if you might remember, I was the CTO and IT -- head of IT for a while. It's a lot of changes in the network to be doing mix and match, bringing in partners, seeing that the building is working. It's a work that had been ongoing for 3 years, and you see the benefits right now. Nobody else in the market can do this because it's so complicated from an IT point of view and seeing that everything hangs together and our customer gets the experience.

So before Ronan talks about how much we're lifting and so on, I just need to remember that this is something unique we have built. And then on the TracFone, I think that what I want to say, what we saw is that we have had prepaid, we haven't been that successful on it. They have been. And of course, we want to see that we are part of the value segment. So this is a value segment because certain customers want to be in that segment, and we want to keep that, and we want to support it. We have some synergies in the back end. But clearly, we're going to keep that market, and we're going to keep those customers because that's an important market. And we want to be the #1 in our premium market. We want to be the #1 in the value market. So that was the whole idea about it and it's straight up in the line of the network service strategy that we outlined. Now you can speak, Ronan.

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Okay. So John, thanks for the question. And let me break it into a couple of component parts. Quite rightly, the focus is on unlimited. But I just want to remind people that we're also enhancing proposition in our meter, in our prepay and in our Fios home proposition, all of which are intended to increase contribution.

Second thing I said here is the way we're building the machine is my actual cost of acquisition is more efficient as well as my average value of the customer that are acquiring higher, and my customer retention is kind of flat against an improved churn. So all of those are drivers of value dynamics.

Within the step-ups, think about high single-digit dollars ARPU uplift for the people who move up. Then the second part of your question was, given that we've wholesaled traditionally into the prepaid market, why are we moving prepay? And I wouldn't overly personalize it, but I came from a market where we had a very successful prepay business. As we've built out our capabilities and technologies and as I've worked with Kyle, particularly and understood the capacity and capabilities of the network, I was increasingly confident that we could bring more benefits to the value segment, we can enhance the product set in that space. And therefore, we could improve the opportunities there for the customers who are served in that value segment.

I also think that I now have the capabilities based on the approach that I told you about the platform approach and then the analytics and capability above it to better serve the needs of those segments in a way that we can give real value and enhance benefits from Verizon's ownership of TracFone. So that's why we're confident that that's a good opportunity for the customers because the one thing that I would say overarchingly here is, if there was one metric that's the most consistent is, it's the improvement in NPS that's been going on for the last 7 or 8 quarters.

And that demonstrates that more of our customers value more of the things that we're doing. That opportunity to bring that into the value segment as well I think is a compelling proposition for consumers, and I'm excited about doing that. And I think it can be accretive ultimately because of the quality of what we bring to those customers and the efficiency with which we bring it.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Okay. Matt?

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**Matt Ellis** - Verizon Communications Inc. - Executive VP & CFO

Thanks, John. The only other thing I'd add to what Ronan said is remember that the construct we have, where you bring the customer in and then you have the ability to step them up to higher tiers, with the new price plans that we've just put in place in SMB, we now have the ability to do that on the B2B side as well within the small medium business segment, too. So that ability to step people up is something that the consumer team has been doing now, obviously, for a few years. And we now have the ability to do it as we go forward on the SMB side as well. So continued opportunity for us to drive service revenue growth.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

And I think that's an important -- and maybe, Tami, you want to mention a little bit more about that because we are thinking in the same way, again, we're using the scalability of our platforms in order to address the market. And as Matt said, both for SMB and enterprises.

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**Tami Erwin** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Business Group

Yes. Listen, I think you said it well, it's been years to build out that infrastructure. And what I love about the way that we're structured is we can take that and repeat and use that same scale from a network and an IT capability for both consumer as well as the offering we have for small business. You might have seen us launch that about a week, 10 days ago, and it really gives us the ability to take that mix and match capability and tailor it to small businesses. And if there's ever been a time, small businesses want choice and flexibility, it's right now in a COVID environment, where we can package incremental value like digital capability, like security and then like video and collaboration tools, we have the owner's economics of now owning the BlueJeans platform that we acquired in May, and that really gives us more tools to build against customer requirements. Be it consumer or that same platform to scale for the growth opportunities in small business.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

Okay. We're going to go to the next question. We're going to go Mike Rollins from Citi.

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**Michael Rollins** - Citigroup Inc. Exchange Research - Research Analyst

Thanks for putting all this together. Two topics, if I could. The first was following up on something. I think it was Ronan who mentioned about the cable companies. And I think the comment was that you've expanded and extended the relationship. So I'm curious to learn more about what that entails. And in that context, does that now allow the cable companies to create their own capacity and coexist with the Verizon capacity? And does this take away the risk that the cable companies might use another vendor for their mobile capacity over the next few years?

And then if I could just ask on a second topic regarding the postpay market. Just curious what you've learned about the ongoing growth of the postpay market in terms of where it's coming from? And your feeling about how long that can continue to sustain itself?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

I will start, but Ronan will comment. I think that -- I think I said that we feel good about our relationship with the cable companies that are doing MVNO and us. And we treat them as an enterprise customer that we would have in Tami's organization. We give and take, but it's a little bit interesting for me. There was a lot of discussion from the analyst for 6 months ago that this -- somebody will take it away from us. I haven't heard a question for a long time. So something has probably happened.

But again, I feel really good about where we are with these guys. And we will continue to serve them in a good way, but always with the financial prudence we have. So that's what I can say, and probably Ronan can say something more. But that's what -- how I feel about it.

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Sure, Mike. Thanks for the question. If I break it into 2 parts as regards their network strategy and the public fact that they've acquired Spectrum. The specifics of that, you would have to ask the cable companies. But all I would say to you is that a single band of spectrum doesn't create a network in the context of the service you deliver to customers. And yes, we have expanded and extended our relationship in order to make sure that the customers at Charter and Comcast would have access to the enhanced engineering capabilities that we've been delivering. And as a result of that, as I indicated, I think we've created the conditions to ensure that we're their primary provider of connectivity for the foreseeable future. But as regards to their specific strategy about their core or anything else, those are questions that you would have to direct to them because in that regard, they would be a competitor.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

postpay market, have you learned something?

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

What have I learned about the postpay market? So it may sound obvious, but I would just remind people, one of the drivers of this growth in postpay is the fact that essentially, everybody who passes the age of x is taking a smartphone somewhere in their teens. But everybody who leaves the market at the other end, if I put it that way, probably didn't have a smartphone. So within a population that's not really moving, you actually have a significant entry to the marketplace. That, plus immigration is a factor. The other thing that also drives in our multiline accounts is connected devices, whether that be more or more tablets. And one of the things I mentioned was we refreshed the whole portfolio as well -- we refresh the connected devices element.

The other thing that we see, and it can be cyclical based on the overall economic cycle is pre to post-migration, which is also a factor. And all other things being equal, although we've seen growth in our prepay base recently as we've reported, that's not something we particularly participate in maybe relative to others. But -- so there's probably slightly more growth actually in the prepay segment at the moment, probably growing at 1 or 2 percentage points per annum more in the recent quarters than maybe the postpay market.

So I think we have the opportunity to be exposed to all of that. And the last thing I would just say about the MSOs is that we're very conscious that we're a partner of choice when it comes to wholesale. But we're also very comfortable to compete the hell out of every segment in the marketplace every single day of the week. And that's why when I've refreshed all of my propositions, and the fact that I'm increasingly improving my mobile and home value proposition to customers. I'm positioning myself to compete in every segment of the marketplace direct.

**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Thank you, Ronan. Tami, maybe you can say something about the postpaid market in the business segment?

**Tami Erwin** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Business Group

Yes. I think one of the important things that we've seen in the enterprise or the B2B side of postpaid is not only do we enjoy market share leadership today, but throughout '20, we've continued to take market share leadership. But when you look at, Mike, where new growth comes from, when you think about the COVID environment, what we're seeing is new models begin to emerge. I'll give you 2 examples that I think are really important as we think about expanded growth, both for B2B as well as B2B2C as we think about health care. And we think about education, both really radically changing as we think about what will that look like in the future. So when we think about how do we serve postpaid customers in that environment, opportunity to continue to drive growth, not only for traditional customers, but for new and emerging growth segments like those 2 that really reinforces for us that we're well positioned in a segment model to meet the changing needs of customers be it B2B or B2B2C.

**Brady Connor** - Verizon Communications Inc. - SVP of IR

Okay. So we're ready for the next question. We're going to go Craig Moffett from MoffettNathanson. Craig?

**Craig Moffett** - MoffettNathanson LLC - Founding Partner

So I want to stay with the -- what seems like it's the question of the day here, which is the coverage of Ultra Wideband for a second. Maybe you could put it into just sort of time on the network terms, if you can't quantify the y-axis for us. I've seen reports that say, today, it's 1% of the time. But if I look out 5 years, what's your expectation for a typical user on how much of the time that they're on the network they're actually going to be in a range of a small cell using millimeter wave such that they get the real Ultra Wideband experience. And if I could just expand that, when I think about in-building, in particular, what's the business model for getting in-building coverage and covering the cost of all those cells?

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

Okay. So I'll start with first -- 2 different questions. I'll start with the first one. Our -- as I showed in that 1 slide, we're targeting areas that are capacity constrained, if you will, right now, and other areas that we could really show off the tech, i.e., stadiums and arenas, unfortunately, COVID threw us a bit of a curveball with those type places. But people will come back to those.

So -- but those are areas that we can really show off the technology and we started putting on. What's going to -- I don't want to say it's an 80-20 rule. But if you look at people's typical usage, you're generally in the same area a lot of the time. So if you -- if we put the capacity in areas that people are most of the time, we're going to get a lot of usage on millimeter wave as we start penetrating the base with these devices that are capable. So in the near term, we're probably looking for about 5% of our overall usage to be on millimeter wave, but that's going to ramp significantly as we continue to ramp our deployment, and we continue to see devices in the network to do this.

So it's my expectations, and I'll try to say the word cohort again because I couldn't before. But if you look at the urban cohort, then at some point in the not-too-distant future, we're going to start seeing upwards of 50% of my usage on millimeter wave in that area. So this is going to be a significant game changer for us. It really gives us the capacity that we want. Remember, we started talking about this stuff, it's capacity. And that's what we're putting out first. It allows new business opportunities, and it allow us to do things that we couldn't done before because of the upside in the bandwidth.

In terms of the in-building stuff, I don't know if I'll take that one, too. I mean it's no different. People put in WiFi in their campuses and in their buildings, et cetera, and so on. The capabilities that we bring that Ultra Wideband brings along with the MEC, can change the way CIOs think about how they run their operation. Tami and her team have been doing some great things, and you might want to come and talk, but we have some of these campuses that we put 5G on mainly down in Newport News, and they build ships. It changes the way that they actually build their ships. So

these are the kind of things, groundbreaking things that we're looking to show -- go out there and showcase and people will figure out how they use it for their own efficiencies. But I'll let Tami comment.

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**Tami Erwin** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Business Group

Okay. We'll trade spots on the stage here. Listen, I think when we think about UWB being not only capacity, but capability, we have very specific examples today where we've done in-building that is a game changer for manufacturing. As we think about health care, as we think about supply chain, these are deployments that we actually have deployed and have solutions up and working. So when you think about the capability, it is really the capability for CIOs who think about solutions that they can deploy on their campus as we think about how quickly you can scale that. It's the reason why I think talk about both the private network and mobile edge compute together because you think about the power of bringing those together, and we are seeing CIOs really redefine how they think about solutions that comes back to the capability that we can deploy with UWB.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes. Thank you. Ronan, finally.

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

So Craig, just one thing, when you're thinking about the metrics and how it grows, taking the Kyle point is, just think he talked about kind of in the current short term, maybe 5%. Just think of the fact that 2/3 of my base is on iOS. So exactly 0% of those up until the other day, had access to Ultra Wideband.

Think of the fact that I mentioned that about 45% of what we sold in maybe September, October time in Android. So you're probably low single digits to 5G Ultra Wideband devices in. We're already seeing that sort of percentage that Kyle talked about. So we see the adoption curve -- my personal views, the adoption curve of 5G devices. All of the lead ones of which support Ultra Wideband will be at least as fast as the 4G adoption curve and maybe a little faster. So when you put those 2 together, you see how as the network scales and as the capacity demand scales, you'll actually have the base of 5G-capable devices to support it.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes. And one another thing on indoor, which is, of course, one of the flip sides, when you have the Ultra Wideband in urban areas, of course, you unleash the 4G capacity to be an indoor penetration much better from the outside as well.

So you get a lot of benefit for our customers, but with the experience layer and the capacity layer that we're building. So that's what we see, okay?

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

We're going to go to the next question from Frank Louthan with Raymond James. Frank?

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**Frank Louthan** - CIMB Research - Research Analyst

Can you talk to us a little bit about your expectations for return on invested capital out of the 5G investments. And with that, have you had any conversations with the incoming administration about how they're viewing the FCC and the potential bring back Title 2 and what that might -- the implications that might have for your expectations for returns?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

So when it comes to our capital expenditures, I mean, maybe, Matt, you want to say something. I'm not sure, Craig, you can say something about the administration so prepare yourself.

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**Matt Ellis** - Verizon Communications Inc. - Executive VP & CFO

Yes. So on the ROIC, Frank, we look at our investment in 5G, the same as any other capital that we put to work in terms of -- it has to generate a return for our investors. And so we certainly look at that. And what Hans mentioned earlier is exciting about it. It's the first time we've had a wireless technology where we get multiple revenue streams off of the same investment. So that really opens up some different opportunities for us. But I am very confident that our 5G investment will continue the strong ROIC story you've seen from us in the wireless space over many years now.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

And also adding to that, we have transformed our CapEx planning and how we spend quite dramatically over the last 3 years. I mean we don't speak so much about fiber here, but, of course, we are building a lot of fiber in order to have our own fiber and own economics for all our 4G and 5G network at the same time. So we are doing a lot of things to future-proof our network. So we're going to have the owner's economics and actually being able to have the best return on investment on our network as well. Craig, do you want to say something?

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**Craig Silliman** - Verizon Communications Inc. - Executive VP & Chief Administrative, Legal and Public Policy Officer

Sure. Happy to, Hans. Frank, great to see you. So a couple of points there on the administration. First, obviously, we're in early days, the administration officials haven't been named. We obviously know a lot of the folks who are likely to end up in the administration. But one of the big themes that obviously has been driving the Street recently, is that this election has resulted in a more centrist likely policy agenda. That'd be the first point I'd make.

Secondly, as you know well. Title 2 is less the question, the question is what do you do with Title 2? And I think COVID has provided an interesting policy experiment between the U.S. and Europe. We have seen a situation in the U.S., and here's the one answer that you'll hear today that's not about just Verizon. But the industry as a whole and networks as a whole in the U.S. have performed brilliantly during COVID with all these changing usage patterns and increased usage patterns.

In contrast, what you've seen in Europe is strains on the network, and that hasn't been lost on policymakers in the U.S. I think that the policymaking environment we've had in the U.S. that actually incents investment in the networks has actually paid huge dividends. So I'm confident that the incoming administration is going to look at this and say, "Whatever we want to do around Title 2, what we don't want to do is disincen the network investment that has actually really paid dividends for the U.S., all the U.S. networks throughout COVID." So I think whatever happens, we'll continue to work with policymakers, but we feel very good that we're going to be able to compete and win in the policy environment, whatever that may be in the next administration.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

Going to go to the next question, Peter Supino from AllianceBernstein. Peter?

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**Peter Supino** - Sanford C. Bernstein & Co., LLC., Research Division - Research Analyst

Few questions, if I could. First, I wanted to just ask if the 30 million home TAM for FWA is a residential FWA TAM? Or is it a 5G Home TAM? And then the other question I wanted to ask, follows up on David Barden's question. Our experience walking around New York City with a 5G phone is that

the coverage -- appreciating very well that it's a capacity layer is really measuring strides, blocks, lost a signal quickly moving around with New York City's density and fiber depth priority for Verizon, we hoped for better. And so we're just wondering if we could expect New York or Chicago to really be a laboratory or a glimpse of the future.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

So the first question on the 30 million homes, that was homes. Then of course, we've seen other opportunities as well. And remember, this was 2017 we talked about it. Of course, a lot of things has happened. We have not changed the target. We have the same target to -- of addressable TAM. We just see different ways of doing it, but we have not changed that one. We still have the same targets. And this team, they stick to the targets, and we execute on them, as we have shown you in the previous slides when I spoke. So we have these targets still and we're going to continue with them. Then we find new opportunities and new ways of doing it, and we will do that for sure. Do you want talk about New York?

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

Yes. Well, in terms of the build-out, that's why we're scaling this machine as quickly as we can. We want to put thousands and thousands per month. So we can scale this thing as quickly as possible, so people can use it. So it's early days. I mean it's early days of the deployment. Like I said, there's been some headwinds this year, but we're on track to doing it. And we're just going to keep building this thing out. So it's going to get better and better and better. We're not resting on our laurels and saying we're done. It's going to get better as we go.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes. And we're adding capacity in all these places. Thank you, Peter.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

We're going to go -- we've got room for 2 more. Next up is Walt Piecyk from LightShed Partners. Walt?

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

I also want to go back to one of the Kyle slides, the capacity margin slide. I'm just trying to understand what -- how does that math work? Because it's hard to think about that on a nationwide basis, there's not like nationwide busy usage. It's -- if I'm like 50th from third, what's the capacity there? And what's the usage? So how exactly are you trying to represent that? And in some cases, the capacity actually looks like it went down at some point in 2020. And while Kyle is addressing that, could you also talk about DSS? We had an event, I guess, or a call with a CTO, who is also using DSS. And he said that there's an issue with the phone in terms of carrier aggregating multiple bands in using DSS. I'm just curious, is that an issue anywhere in any of your phones? Are you able to aggregate multiple bands with DSS?

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

Yes, yes. Yes. Let me start with the -- well, let me start with the last one. The answer is yes, absolutely, we are.

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

I just had one more. Okay so you're already doing it, so the CTO obviously needs to talk to their vendor. The CTO needs to talk to his own vendor and find out why it doesn't work for him, but it works for you guys? Is that -- is he just ...

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

I don't know who the guy is or what his issue is what I can tell you is that the DSS is working like we want. Like I said, there's certain modifications we could still do to make it even work better. But where we're seeing things that can do better is with the schedulers, each one of the vendors have different kind of schedule logics. And how they deal with the PDCP aggregation, they're doing it differently. So we're learning what the -- probably the best way to do it is, and we're working with all of our vendors, be it Nokia, Ericsson or Samsung.

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

Are you carrier aggregating or not on DSS?

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

Well, DSS is your control -- well, it's a control plane, right? So what you're doing is...

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

Right. But if you're only using one of the bands, that's why your speeds are not doing well with DSS, you have to carrier aggregate multiple bands to get a reasonable speed.

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

We do. We are carrier aggregating for the bearer. What I'm saying is DSS is used for control plane. And what we do is, that's how we're able to balance 4G usage and 5G usage and even the playing field for everybody. I'm carrier aggregating. I don't understand -- I don't know what your CTO -- maybe I'll help them out, let me know. But the first question was about to -- yes, that's easy. Yes, that one is easy. So what we do is each -- we look at each cell site, we call it floating busy hour. So we look at each single cell site and at the busiest time of the day, how is it doing relative to its capacity and utilization. So you got to look at each cell site in each area, and that's how we measure that. And that's how we end up with the overall aggregate, and that's what we show. But we've been consistent with that over the last 20 years.

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

So some guy in North Dakota could have a lot more capacity than I do. So how does that chart tell me how this is performing for the vast majority of your customers?

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

What it tells you for overall for the network, the capacity headroom we have. We've had this measurement since the beginning of time in wireless. Each area certainly has different characteristics based on usage, how many people are there, what the level of usage is, all those kind of things. And that's why it's interesting for us as we now are going to have a mobility and a home play, they're different use cases. So us keeping on top of this capacity and understand what's going on at a micro level, and that's what we do. That's why I'm organized the way I am. We think globally, we act locally, and my engineers are taking care of stuff at a micro level. What I'm showing you is just the aggregate overall of where we stand.

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

Okay. Just -- I didn't get to my last question on that, what you were just answering, I think it was Peter's question. You said you wanted to get to thousands of sites added per month. Don't you need to get to like tens of thousands of sites per month if you want millimeter wave to give you the UMW coverage that you need?



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

I think the path that we're on, the machine that we've built to pump these out and do thousands a month is going to allow us to hit our game plan.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes.

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**Walter Piecyk** - LightShed Partners - Partner & TMT Analyst

Thousands a month of small cells with the way millimeter wave works is enough. Okay.

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**Brady Connor** - Verizon Communications Inc. - SVP of IR

All right. We've got time for one last one tonight. We're going to go to Mike McCormack with Guggenheim.

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**Michael McCormack** - Guggenheim Securities, LLC, Research Division - MD & Telecommunications Senior Analyst

So Hans, it's either for you, Ronan or Matt, but trying to unpack the GDP-plus growth. I guess, I've been digging in on a lot of angles here, but when you think about the trade-off between ARPA growth, revenue opportunities, that versus long-term subscriber growth how do you weigh what's going into that GDP-plus number? Is it going to be much more weighted towards the revenue? Or 50-50 on subs and revenue? And then I've got a couple for Kyle. I guess one, the 5G Home data point was interesting because the usage that he's talking about on a daily basis equates to about the same usage that cable is seeing on a monthly basis, I'm just trying to see whether or not that's a scalable business at that same level of capacity utilization. And then just lastly for Kyle, network slicing. One of your new competitors made a comment that they think they've got the secret sauce and that incumbents don't. Just trying to get a sense for what he thinks about that.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Yes. On the growth and the GDP-plus, I think what we have built -- we have built sort of our business plans around these growth vectors. And all of them are adding up. And of course, it's a combination of subs, but of course, in the core offerings, both in Tami's and Ronan's world, we also see expansion of the TAM given that we have more offerings when we go, for example, in the threshold of the unlimited, et cetera. So it's both of them. But I think that what I'm trying to say is that the 5G adoption has multiple opportunities both from more subscribers, but also on value-added services as Ronan spoke. Maybe you want to add something Ronan?

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

So Mike, the only thing I would add on that, which I think is an important thing is the structure that I outlined in my presentation means key drivers for me are my cost of acquisition and cost of retention and my ability to increase what the customer spends with me every month. So respectfully, you should be provided. I manage those, you should be ambivalent as to where that dollar of incremental service revenue comes from as long as I've got the operational leverage to drop it to the bottom line. So what I'm trying to make sure is I'm efficient in all of those so that my investment can be smartly deployed. So rather than chasing one particular vector of growth at the expense of others, which might distort the market, I have a machine that's much more optimized to go where the maximum return per incremental dollar is.

And that's what I think is much more sophisticated in my business today than it was a few years. And that's exactly why when Hans answered about 5G versus 4G monetization of it, customers don't buy different products like that. They buy the experience that's enabled by our network superiority. So I'm trying to make sure that I present those choices out to them in exactly that same way.

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

And then -- thanks for the question on slicing. So we are right in the middle of putting our SA core in. That's what's going to give us the capability to do that at 5G SA core. We're starting to roll that out this quarter. And in '21, we'll have it fully -- kind of fully operational. Now we're working on the use cases of it and how do we -- the harder problems we're dealing with right now are how do you get end-to-end slice, right? So it's kind of easy to slice the RAN. I think we all know how that's going to go, setting it up right is going to be difficult, but we'll do that.

But then how do I carry that through all the way end-to-end? So we're thinking about that. A customer wants a slice, they want a full end-to-end scenario. So we're working on those hard problems, too, with the landline side. So early days with it, but we're excited about it. We think it's going to be a good feature that especially enterprises will want to use in others, but you'll start seeing that in '21.

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**Michael McCormack** - Guggenheim Securities, LLC, Research Division - MD & Telecommunications Senior Analyst

Great. What about the 5G Home, Kyle?

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

5G Home about the usage?

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

About the usage? That was Ronan...

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

That was Ronan.

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

Ronan gave that, not Kyle. So that's somebody asked you to do.

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**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

That was Ronan, why don't you ask him?

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**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

So they comment about 5G usage. So we've seen 5G Home usage actually grow -- increase throughput speeds. Now we're seeing on average a gig. And what we're seeing is about 700 gigs a month, which is actually slightly higher than we're seeing in the Fios footprint. Does that answer your question, Mike?

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**Michael McCormack** - Guggenheim Securities, LLC, Research Division - MD & Telecommunications Senior Analyst

Yes. The question was more, I guess, around sustainability as that scales up because it becomes...

**Ronan Dunne** - Verizon Communications Inc. - Executive VP & Group CEO of Verizon Consumer Group

Yes. Well, Kyle has so much spectral capacity you and I will be long since retired before I have any contention in the network whatsoever. You should see it as close as a wireless network can be to a direct substitute to end-to-end fiber because there's just literally so much capacity there. No expectation of contention. And don't forget, when they're using it in the home environment, the time of day, the other things which Kyle was mentioning when he talked about how he manages capacity. I'm using it in a lot of cases, differently and at different times. So the combination of those 2 things is I'm selling the same capacity at different times of the day for mobility and for home, and I have so much spectrum that, as I say, we'll all be long since retired before it runs out.

**Hans Vestberg** - Verizon Communications Inc. - Chairman & CEO

Okay. Mike, thank you, and thank you, Ronan and Kyle, Tami, Matt, all the leadership team here. And of course, thank you all for attending the sell-side analyst update. I hope it was beneficial for all of you and that you got some more insight where we are on our execution.

As I said, I feel good about where we are and what we outlined 2 years ago and where we are right now. And looking forward to move into next year. Of course, we're going to close this quarter as well. But coming into 2021, we have many of the pieces that we wanted in order to execute and take benefit on the investments we have done. So once again, thank you, everyone, and goodbye, and good night.

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