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PRESENTATION

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Oh that's -- good morning. Welcome to the Verizon Investor Day. For you here in New York, thank you for joining us. For everyone on the webcast, great that you're joining us here in New York.

First of all, safe harbor. Whatever it means, it will be some forward-looking statements here, so you know that drill. So I promised Brady I'm going to mention that, so we'll start with that.

But let me also start with saying that the last 12 months has been very eventful. We had this event last year in February time frame as well. There's a lot of things that's been happening, but not only last year, even the last week. We have quite a lot of things happening. And I think there's no surprise that after 2 years, we actually have a decision on T-Mobile and Sprint. As I've said so many times to all of you asking me, we actually put out a strategy 1.5 years ago that was agnostic to whatever outcome. And I think what you're going to see today, we feel very confident that we have been executing for 1.5 years on that strategy, and we're in a really good position and put the fundamentals right for going into 2020 and beyond.

Secondly, I get a lot of questions on the coronavirus, of course. Of course, it's a bad situation. We -- at the moment, we are following it very closely. We don't see any direct impact on our business so far. But be aware, it's probably not the last cycle of information coming from the coronavirus. So we would be close to it, but so far, we haven't seen any impact of it. One of the impacts, of course, that the biggest trade show in the industry, the Mobile World Congress is now canceled. So of course, that is an impact, but directly on business, we haven't seen anything so far.



So that's -- a lot of things is happening, but let me talk a little bit more of what's happening for Verizon. This slide you saw last year already. This is our strategy, the Network as a Service in the middle. We believe that the network, the distribution and our brand is actually the key differentiator in this market, and I think we have proven it last year. Of course, a lot of focus on the customer first. What we have done here, not only that we changed the structure but also the way we are now doing the Mix & Match and all of that. Very high focus for us and it's fundamental for our overall strategy.

The other fundamental of our strategy is, of course, the innovation and the growth that we are trying to create. And I will talk more about 5G later on, but clearly, some of those areas are basically just opportunity for growth for us as we build a network that's an Intelligent Edge Network, multipurpose network that actually can have a better return on investment than anybody else in this industry. So that's also a very important piece of our fundamentals.

Another fundamental is continue to be disciplined with our financials. And I can tell you, working in this company for 2.5 years, I'm impressed about the guys, how detailed we are in our financial decision, our return on investment decision, the yield decision, all the time that we see that -- if we do something, it's a long-term value creation and clearly how it hangs together. And finally, also, what we have been working a lot and I think is a key differentiator for us is working with the culture of the company, the purpose of the company.

The last 1.5 years, we have embedded sort of our responsible business into our main strategy, everything we do in society. It might not feel super important for you guys, but if you run the company with 135,000 people, to have a purpose, to see that you actually bring everything together in your social commitment, it's a big key differentiator. And for us, we put a lot of emphasis on all the stakeholders, all the way from our shareholders to our customers, to our employees and society. And that would build together in this overall strategy.

All in all, we think with these fundamentals and where we are, I'm going to talk a little bit more about it, we can grow GDP plus and continue to have strong earnings and cash flow. And you already see this year in our guidance that we clearly see that we can continue to accelerate both the revenue and the cash and the EBITDA -- or EPS in this year 2020.

Just trying to map out the journey we're on. And you have seen the heavy lifting Verizon have done in 2019, and I have to say I'm extremely proud of the team. We changed the network. We changed the structure of the organization. We took out -- a large portion of our employees took the voluntary program, and they, of course, were doing something. We changed the brand, the brand perception.

And hopefully, you'll see what we do with the brand. We are now all Verizon. Whoever you are, if you are the guys that are doing the heroic work on the streets of New York or building the fiber or if it's the editors of Huffington Post, we're all Verizon. That's a very important decision. Seems very easy, but I can tell you, when the brand value is one, it makes a huge difference for the perception from all around us.

And ultimately, we've also been — done quite the heavy lifting. I mean the management team sitting on the first row here, the majority of them are new to being an executive team of our size. As well as even more impressive is, of course, the top 100, the changes we have done there on diversity, new talents coming in. That gives me a lot of comfort, where we are going, moving into the stages where we now start leveraging our assets. Think about that we want to grow our core assets, number one, and strengthen them and then leverage our new investments, and that's the journey we have in order to really have a strong position out in time where we can grow and innovate on a base of a technology that nobody else has.

That's the journey we are taking right now, and what you have seen in 2019 is, of course, quite a dramatic change of it. I will not go through all the things we have done that we feel really good about. Hopefully, you feel good about it as well, everything from our 5G first in the market in 2019 to the partnership that are unique for us, where we actually offer the best brand, the best distribution and best network. It's a reason why AWS, Disney, Apple Music makes deals with us. And it's not that they are riding us. It's a win-win.

And I've talked a lot about it before. We feel really good about that model. We're not going to do it with hundreds of companies, we're going to pick the ones that really move the needle for our customers and value creation. And we have already 3 of the biggest brands in this market.



Other than that, a lot of other things. We changed the structure. We changed the reporting, which is important, new management teams. We have built a new purpose. We have committed to a lot of things in our society, all the way from climate to education in the market. All that comes together in our overall strategy for the company. And I think that when I come out -- or we come out in 2020, we will have very strong fundamentals for actually execution.

So if I look at 2019 and just put it together, with all those changes and those fundamentals, you can see that we kept all the leading indicators at the leading. I mean number one, the network is the best. We just came out with J.D. Power and RootMetrics, and we are at the top again. We continue to be at the top year after year. That tells you a little bit about how great our engineering team is and how great they are working.

We also saw in the latter part of '19 that our model with our Mix & Match and our way of working with unlimited continue to pay off with loyalty and growth on net subscribers. So that means that the model we already came out with in 2017 with unlimited is really paying off when we now have come in, in the second part of '19. And that will, of course, flow into next year where we -- or this year where we feel good about where we're going.

We created this partnership that we're really happy about. But not only that, we continue to have a brand evolution where we actually are the best and recognized and trusted brand in the market, which is very important for us. Trust and innovation are the brand values of Verizon. And to be recognized for those, that's great work from a brand point of view.

When we did all of that, we delivered what is on the left side or whatever for you. It's right side, the right-side for you. We had the best phone net adds since 2013 in 2019. We have the highest wireless service revenue since 2014, had the best cash flows in 2015 and we have strong EPS -- adjusted EPS growth as well. With all those changes, that tells me something: this team and this company can execute on a strategy and deliver, at the same time, a massive change, massive change.

So where does it lead us going forward if that is the core business? Of course, it's led us to this fantastic slide that some of you have seen several times. This our -- is our 5G strategy. We built a multipurpose network already announced 2017, the Verizon Intelligent Edge Network. We did that because we saw a great opportunity for efficiency, but more important, a great opportunity for delivering new type of service to our customers.

We suddenly have 4 business cases on the same infrastructure. [The cost is] always on a new technology. Every technology has a better way for dealing with data. So that's number one.

Number two, the mobility, where we are clearly the leader in the market. That's posed a new opportunity for us in 5G. We've built a network that nobody else has and with a better performance than anybody else. So of course, the mobility case, both for business customers and consumers, are creating a great opportunity for us going into this year and onwards.

Then we have the fixed wireless access, which, of course, we call 5G Home in many cases. Great opportunity for growth outside our northeastern footprint. It's a nascent market for us. Everything is just growth for us. Remember, it's the same infrastructure we're building on in order to get the best return on investment. And it's not only for home broadband. It's actually also for small and medium companies that you can offer this, so it's a business proposition as well.

Ultimately, you have the 5G mobile edge compute, which is actually bringing the compute and the processing to the edge, which is a trend -- clear trend in the market. We have 3 business cases here, and we have launched one of them. That's public mobile compute centers that were launched together with Amazon. So I think we're well positioned, and that's a totally 0 market for -- growth market for us today because we're not into it.

Here, we suddenly can go into the cloud market with the 5G platform. Think about 5G as a platform rather than a connectivity only. And that's why you need to have a company like AWS together with Verizon in order to deliver it. We cannot do it alone because we're not in cloud, and AWS cannot do it alone because they need to have the 5G currencies to bring down the latency, which is one of the first use cases when it comes to the 5G mobile edge compute.



Later on, there are 5G mobile edge compute for private usage, where you have a private network that you set up, but that, we will come to later this year, and it's more about what we're doing right now. So this is really our 5G strategy, which is above and beyond our core business that we still believe we can grow and do more in.

So if I look at the market in general, and much of this is known by the market, but why would we be so good positioned for the 5G expansion that we see? Clearly, the reliability of the network continue to be #1 for our customers. If that's consumers or business customer, it doesn't really matter. Both of them are really keen on that. The data privacy is just increasing the trend on that as well as getting distributed compute and application at the edge.

That is happening. Our proposition with 5G is actually meeting all those demands, given that we both had a network leadership, we have also the customer-centric organization and we've built a 5G mobile edge compute. That's how we see the trends in the market. Tami that is leading our Verizon Business Group with Rima doing the partnerships, we have been visiting numerous customers — enterprise customers during 2019 to understand what they need. This is a summary of what they need and what we can deliver. We are very excited about the opportunities we have on the 5G.

So let's look a little bit in 2020. What does it mean for 2020 then? The 4 priorities for 2020 are very simple. In my case, I use exactly the same targets internally as externally. So these are the same slides I use for everyone. Number one is grow and strengthen our core. Number two is levering the assets that we're investing in. Okay? We mainly talk about our 5G, our fiber, our ad platforms, the things that we're investing in that we think are important for the future. And the third one is continue to drive discipline in financial, sort of balanced way of dealing with things. And of course, seeing that our balance sheet stays in a very good place and, ultimately, infuse in this purpose-driven company as well the customer-centricity. And that's very important for me, when you run a company of this size, that you continue to have that also at the very high up. And when it comes to the cultural change, we have done quite a lot in 2019.

So when it comes to strength in the core, as I said before, we feel really good about the models we have created when it comes to the consumer and business side of wireless, with Mix & Match and the way we can actually work with our customers. I mean if you think about the consumer business we have, roughly 50% today is still on metered plans and 50% on unlimited. The majority on unlimited are actually on the lower plans. Our journey with our customers is to see that they have the ability to enjoy even better performance and move up the ladder. That is a great opportunity on the existing business we have that goes also to our fiber deployment on the Fios, which we come out with Mix & Match as well.

So suddenly, you see the customer-centricity, how we can actually work with the models that we developed for a couple of years ago. That's what I'm saying, feel good about the strategy we have laid out 1.5 years ago, and it will not change regardless of what's happening in the market right now. We have been onto this execution for 1.5 years.

Also, what we're doing, we're investing in the Verizon Business Group, and you saw that in the fourth quarter. That's one of the biggest opportunities for growth we have with mobile edge compute, the 5G wireless for businesses as well as the fiber deployment we have. We just need to get a consistent way of delivering it and getting synergies here. We have products for any type of customers. Because they have different channels from the beginning, different processes, different tools, we are now bringing that together in order to be really strong in front of our customers going into this year and the next year.

And as we said in the earnings call for fourth quarter, the cost investment we are taking right now, we will see some positive impact on those in the latter part of 2020 and then into '21 and then revenue opportunities coming from end of '21 and '22. That's basically how it works. So we feel really confident that Verizon Business Group is one of the most important growth engines we have in front of us, and that's why we do the investments.

When it comes to leveraged assets, a lot around the 5G, of course. Fiber is embedded here, the investment we're doing. So this year, we will launch nationwide 5G based on the dynamic spectrum sharing. We're going to launch that when we think it's commercially right, when we see it's enough handsets out in the market. Our technology with Kyle and his team, they will put that optionality for Tami and Ronan when they want to do it. That's how it works.



So we are working dealing on that. Kyle will talk a little bit more about it in a couple of minutes.

We're going to deploy more than 5x more small cells on 5G millimeter wave in 2020 compared to 2019. Just so you understand, 5x more plus. That will render more than 60 cities that will have coverage on millimeter wave by year-end 2020. We have 31 when we came out from 2019. That, of course, tells you that we're not only expanding markets, we're also expanding the coverage in all these markets we're into because we have more than 5x and then doubling the amount of cities.

We're going to launch plus 10 cities on 5G Home or fixed wireless access based on Ultra Wideband together with the chipset that is coming out in the third quarter and commercial product in the fourth quarter. So we're going to address 10 markets. There's no reason to believe that all mobile markets on 5G millimeter wave will be home sooner or later. But given that the device is coming at the latter part, we're going to have 10 markets this year.

Finally, when it comes to the mobile edge compute, which we have launched with Amazon, this year, we're going to have 10 of those centers. We have 1 right now, and it's going to be 10 in commercial usage. So very ambitious plan, all included in our capital envelope between USD \$17 billion to USD \$18 billion. So again, you see the efficiency that we're bringing and the volume we are creating in order to both keep our best network on 4G and making growth there. We will also have the opportunity now to continue our journey to be the leader on 5G.

That brings me to the financials commitments we do for this year. Matt will come back to them. But as I said, it's an acceleration of revenue and EPS in the year and consistent capital allocation even though we do all these changes. And that's why I feel so good about where we are in positioning and what we have done the last 18 months.

Finally, we'll also talk about our capital allocation. As you know, we added the fourth pillar of capital allocation in our fourth [quarter] (added by company after the call) earnings call. And we have -- this is a balance between business, dividend, debt reduction and repurchasing, and that's the order of priority. I think that as we now have got clarity from FCC on the C-band, which we think is a good, good spectrum, I think that we're probably not going to see any material repurchase of shares this year given that the business is the #1 priority for us when it comes to investment. So we feel that is an important milestone.

Ultimately, when it comes to our purpose and what we're doing there, we will continue to focus our ESG on climate, digital inclusion and a purpose-driven company. We think that is creating a totally different spirit in our company, and it's right for all the stakeholders we have.

So I will end up by talking about what we have done on ESG, which we don't usually talk so much about, but it's in the core of the strategy of Verizon. Number one, done quite a lot of changes in the Board. The first Board member that came in when I was -- in 2018 under my tenure as the Chairman was Dan Schulman from PayPal. Now we have Vittorio Colao, CEO of Vodafone -- or ex CEO of Vodafone, I would say; and Carol Tomé, which also is the ex or former CFO of Home Depot.

I think we're creating a Board that is really well capability-wise, and they can challenge our team, our management team every day to actually do a better delivery. So I feel really good about the additions in the Board. We have also appointed chief ESG officer that is actually, of course, internally important so we keep on track what we're doing, but even more important for investors to have conversation about what we're doing in this area and how important it is for investors today.

On top of that, of course, a lot of commitments that we have done around climate, human prosperity as well as digital inclusion. All of them are part of our strategy. So it's clear, this is no charity or philanthropy for me. It's part of our main strategy of what we're doing. And the commitment done around climate, et cetera, that's how our technology is working. And what we have done around education around the country, it's also part of getting more youth being excited for STEM. And ultimately, we have also an ambitious goal of 2.5 million volunteer hours in the next couple of years from all our employees to those type of projects. So we make it a holistic strategy for all the stakeholders, shareholders, employees, customers and society, in all the dimensions so it hangs together.

So all in all, I think we feel that we're in a good place in the strategy we have been executing for 1.5 years. We have put a lot of things behind us, and we are going into 2020 and onwards with a good momentum and a positive attitude.



Thank you very much. Matt Ellis -- Kyle Malady first.

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

I think so.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Sorry.

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

You're -- good. Hey, good morning. My name is Kyle Malady. My team and I, we're responsible for our global networks as well as our technology road maps and making sure we give our customers the best service that we possibly can.

So Hans alluded to this in his opening remarks here in terms of Network as a Service. I'm not going to belabor the slide. You guys have seen this before, but this is actually the physical architecture of the Intelligent Edge Network. And frankly, really what it is, it's allowing our customers to have different access options, having a core that is efficient and modern and easy to scale so we can really bring efficiencies and we could bring new products and services, all right?

This is the architecture that allows us to support revenues from Tami's enterprise group, from Ronan's consumer group to our wholesale partners, to our MVNO partners as well as our MSO partners. So it's really about bringing scope and scale and efficiency to play. That's the fundamental thing here. There's a ton of different technologies, a ton of different programs that go into building this including One Fiber 5G, et cetera. But just -- we always like to start off, this is our north star. This is what we build to every day.

Now let's start with performance of the network. My team and I wake up every day wondering how we can make the network better for our customers. It's what we sweat. Whether it's our Fios network where we have the Fios offerings, whether it's our public and private IP offerings for our enterprise customers, whether it's our wireless network, we take pride in our design and engineering and operations so we can give our customers the best possible service, all right?

And we also think a lot about -- we're engineers, so we like quantitative information. And we always say, it's kind of a Bill Parcells thing, but your -- you are what the scoreboard says you are. So we measure this stuff all the time. What we like to measure -- there's all various different ways to measure performance. We like Root. We happen to like Root because it gives us a lot more insights and it's been consistent over a long period of time. So this is one of our key benchmarks that we look at. As you can see, we've been doing relatively well lately compared to our customers, but we don't sit on our laurels. We engineer this every day to make sure that's going to stay the case.

Now if I take the wireless network in particular, there's 3 areas of focus that we look at to drive performance. The first one is delivering signal, obviously, right? And we call that coverage. If you don't have coverage, you don't have a service, right? But once you get that out there, our engineers spend a lot of time optimizing the signal and figuring out antenna angles, other things and optimizing it on a daily basis.

Finally, they think about how much capacity do we need. So they think about how much capacity might be offered over time in the future and how do they stay ahead of the capacity that will be offered to the network. So I got to say most of my engineers' time is spend these days on adding capacity and figuring out what tools they're going to bring to the table to meet that demand, all right?

So what you can see from this slide here -- I've shown this last year for those of you here last year, very, very similar slide. We've just prognosticated out where we think the usage is going to go in our 4G network. We've had healthy growth over the years 2016 to 2019. People like our service, people use our service. As engineers, we like to see that growth continue. We expect to continue on into the next couple of years as well.



However, what you may notice is that last year, we -- I think we showed a 36% growth. This year, we're showing a 30%-plus CAGR. And frankly, the reason is people aren't using less. Over the next 2 years, some of the usage that we have now on 4G will start to move to 5G Ultra Wideband as we continue to roll that network out. Okay.

Now we've talked about in the past, we use different — there's different ways to create capacity. We'll talk a bit about technology, but on this slide, I want to spend some time on the kind of the tried-and-true methods that we use, the tools we use, the solutions that we use to add capacity to the network.

First is small cells. In 2020, we are going to add more 4G small cells than we did in 2019. So that's an area of growth for us. The same thing on sector carriers. For those of you -- sector carriers is adding capacity at a very local level on a certain face of a cell site so we can add more equipment to the site and get more capacity in there. We're going to do more sector carrier adds in 2020 as well.

Where we're going to stay level is macro cells. We're going to do essentially the same amount of macro cells that we did last year. Some of the macro cells are for coverage. Listen, we still have gaps in areas in our coverage. We continue to work in that and chip away at it. Some of the macro sites we do in 2020 will take care of that, but some of them will be for adding capacity as well.

Now a big source of our ability to add capacity is really leveraging technologies to their fullest extent. I've listed some of them here. We're working on all of these, and these are very important in our ability to get more throughput into our system.

This chart is something we call spectral efficiency. I don't think I've ever talked to you guys really about spectral efficiency. But it's something we as engineers think a lot about because, simply, all this is, is how many bits can I get through 1 hertz of spectrum. And if we bring new technology, we can get more through the same amount of spectrum that we have.

As you can see here, by deploying, by developing, working with the ecosystems and deploying new technologies, we have been able to improve our spectral efficiency by 4x over the last decade. And all the way from back in 2010, with 2x2 MIMO and 64 QAM, now we're up into modulation schemes of 256-QAM, 7 CC potential and advances in MIMO, going from regular MIMO to FD-MIMO and in the future, massive MIMO. So this drumbeat will continue. We are pushing the envelope on this stuff. We will continue to put it out there.

The other key point is I do not have all these technologies in 100% of my network, all right? 256-QAM, pretty far ahead, we're pretty close to 100% penetrated there. Some of the other ones were in only the 20% range; others, we're in the 50% range. The fact is these are tools that our engineers can use at the local level to continue to add capacity.

Now all of that said, this is what I sweat every day. So what this is, it's a view of our capacity in our network relative to the usage being offered to it. This chart is built based on -- it's a roll-up of every single cell site in every single sector we have in the network at the busiest time of the day. That's how our engineers engineer. They do not engineer for the time when nobody's on it, they engineer for the time when most people are on it. And that's when they -- we need to provide the best service.

So what you can see here is -- once again, the black line is the capacity that we have in the network, and the red is the offered usage. You can see, in 2015, we had a capacity margin. And over time, as you can see, there's a little bump in there. That's when we were doing unlimited. So when we went to unlimited, that took a bit -- we took a hit in our capacity margin. And over -- since that's happened, we recovered from that, and now we're on a -- we've actually had a little bit more margin than we did back 5 years ago.

And there's a reason for that, because we're planning for the future and we're planning for DSS, okay? But this is very important to us because we watch these trends at a local level and on a macro level. And in general, what this allows us to do, the engineers are always looking 18 to 24 months out to come up with solutions for capacity in the network because if we engineer in that amount of time, it gives them enough time to react. It gives enough time to do the engineering work, the operation work, integrate the solution and so we can have the capacity there when our customers need it.



2020 is going to be a really big year in terms of 5G Ultra Wideband. This is the year that we're really going to start scaling 5G Ultra Wideband. The last couple of years, we've been developing the technology, learning about it, building the tools, building the systems, building the processes to really scale this thing.

So Hans said we're going to be up over 60-plus cities this year with 5G Ultra Wideband. We're going to deploy 5x plus the amount of small cells that we did last year. Some of these will be for the new cities, and some of them will be for densifying the areas that we've already launched. We're going to deploy a whole bunch more stadiums, a whole bunch more venues. You've seen what we've done with the NFL, what we did in the Super Bowl. Our customers really enjoy the bandwidth we're bringing to those locations, and it opens up new and exciting use cases for our partners, whether it be the NFL, we announced NASCAR today, et cetera. So we're going to continue on that.

On the back half of the year, we're going to be doing -- we're going to start some in-building installations. We've been working with our partners on kind of 5G DAS-type solutions, and you'll be seeing that at the back half of this year. I think for our team -- it's not very sexy but building new processes to move to a small-cell environment as opposed to a macro-cell environment has been a big change for us. And actually, we have an internal saying we're going from kind of making artisanal sandwiches to kind of like a McDonald's. And really, that's what we need to get to if we're going to scale this thing up.

We've done all that hard work. We're at the beginning, but this is going to be the year that we really start ramping this stuff up. And not to say we're not working on the technology, it's important that we get -- especially early days of a technology, we get the kit out there, but we're also continuing on a daily basis to optimize the technology.

There's new things coming. We're testing right now 8 CC. Right now, our Ultra Wideband deployments are largely 4 carriers. We're going to double that. It's working in the labs. We have field tests going on. And this year, you'll start seeing 8 CC. You'll start seeing NR uplink optimization. You'll start seeing new methods for us to be able to connect small cells together without having a fiber connection using our spectrum and using the feature called IAB that allow us to get further reach of the signal and also some repeater technologies that we're really high on that allow us to put the signal in areas that, up until now, people couldn't think you get the signal into, all right? So a really, really big year, a ton of focus, a ton of effort on this.

Also, I think we brought up dynamic spectrum sharing a couple of years ago. We've been working on it actually before then. And simply -- it's simple, but it's really important for us. Simply put, it allows us to transition Gs, if you will, in this case, 4G to 5G in the same spectrum band. Before -- and believe me, I've been around for all the Gs. Before, what you need to do is you need to have clean spectrum to add a new technology. So you'd have to either clear out existing spectrum and then get new phones to go on to that spectrum, which is really a big coordination effort. You have to coordinate with your sales team how many you're going to sell, and then you're stuck with only so much capacity to handle your load.

So it's difficult to do. We've done it over the years. This makes it a lot easier, all right, because I'm able to share. But it doesn't give us extra capacity. I've seen some things -- in the past, people ask me questions like, "Did DSS give you extra capacity?" No, it doesn't give me extra capacity. As a matter of fact, there's a slight capacity hit because of it, okay? And that takes me back to the capacity margin slide that I showed you before.

What happens in DSS, you need to have 4G signaling and 5G signaling in the same band. Therefore, that signaling takes up a little bit of your capacity. But we've known this, so that's why a year ago or more, we started adding more 4G capacity so we can take care of this. Now when we get this feature out — and we feel very good about it. I mean we showed it working with real-live equipment and real-live environment in Maui. I think Nicki was there and a couple of others with Qualcomm. And working with Ericsson, we showed it working there. We've been in the lab perfecting it. We're also out in the field working on it as well.

So we feel good about that. We already have the hardware and software, and we're starting to deploy that in our network. So the preparations are underway. We'll be ready. And when the team decides that they want to pull the trigger on this and deploy it, that's when we will. We feel really good about this. And frankly, first time in my career that I've been able to have a technology available to allow us to put in a new G really seamlessly and really elegantly.



So just a quick thing on One Fiber. We've been at this for a few years now. I'm happy to report that we're on a really good ramp right now. We've ramped up our efforts. We got this machine rolling, we got it humming and we're to the point now that we feel we're at the scale we want to be at to roll this. We've done over 30,000 route miles at the end of last year. Like I said, we're at our run rate. Now what we're doing though is we are starting -- this is a multiyear journey. We're starting with focus on 5G sites and 4G sites, all right? And over time, the asset will be able to be leveraged for Tami's group for all the small/medium business, enterprise, wholesale, et cetera. But right now, we're focusing on that, and it's actually paying off.

If you remember, One Fiber business case and iEN is really about some owner's economics. A majority of the small cells that we're putting up today are riding on this asset. So we're sweating it, we're leveraging it and more to come over time as we come up with new use cases and our customers — that we can sell into our customers. It has a ton of benefits. Nobody else is doing this as far as I know. And being able to engineer and build a network end-to-end and optimize it end to end, we think is going to be a game changer and differentiator for us going forward.

So I guess, in sum, for us in network and technology, 5 key focuses for us: continue on our 4G augmentation work and maintaining our best network status; ramping up our 5G Ultra Wideband build; being prepared to launch nationwide DSS when the business would like to; continue rolling on our One Fiber expansion; and last but not least is cost efficiencies. So they didn't put anything in here, but this is key. We have — we continue to drive efficiencies through technology and process and looking how we do things. So we can take those efficiencies, we can take those savings, we could plow it back in and accelerate what we're doing in the build here because, at the end of the day, it's all about coming up with that Slide 1, the iEN, the fastest we possibly can so we can have the best return on our capital investment and really have the best network in the world.

So I appreciate your time today. And with that, we will hand it over to Mr. Matt Ellis.

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

Thank you.

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

You're welcome.

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

All right. Good morning, everyone. We appreciate your continued interest in our company. And I'll start off by reflecting on the results that we produced for our shareholders.

And you see on the slide, over the past 10 years, we produced an annualized return of a little over 12%. That includes the dividend, the dividend that we have grown now for 13 years in a row, and that's a trend we intend to continue. And we get to drive the dividend increase every year because the core organic performance of the business continues to grow. And you can see on the chart here, over the last couple of years, our EPS has grown from \$3.74 in 2017 to \$4.81 last year. And when you adjust out for some of the accounting changes and the impact of tax reform, what you see is that the operational performance of the business continues to grow, and you see that in the highlighted areas. We grew operational performance of the business by \$0.22 in 2018 and \$0.27 last year. And we have good momentum as we come into 2020, with the expectation that we continue to see that grow.

So that operational performance comes from -- starts with growing the top line. Last year, revenue grew 0.8%, and that was with 3.1% decline in wireless handsets. When you adjust out for that, revenues were up 1.6%. And that revenue growth is a result of getting back to service revenue growth in the wireless side of our business as we've added connections over the past few years. And as we continue to drive that service revenue growth and the cost efficiencies in the business, you heard Hans mention, we produce strong margins and growing cash flows across the business.



And the revenue growth starts with, obviously, what we've seen in our wireless business across both consumer and our business segments. 3.2% service revenue growth last year is a result of having the best network performance combined with the right customer propositions. The value of the reliability of our network is evidenced by the 6.7% service revenue growth that we had in our business segment.

And we drive service revenue growth. One way we drive it is with the increase in connections that we have. And you can see the progress we've made over the past 3 years in the chart on the bottom. In fact, it was 3 years ago today that we launched unlimited. And at the time, there was a lot of concern from people outside the business about the ability of the network to handle the increase in traffic. And as you see from the third-party awards that Kyle mentioned earlier, and more importantly, the reaction from our customers, the network is doing just fine. So we have line of sight to increasing service revenue as we increase the number of connections on the network, and we expect to continue that as we move forward here.

So while we're driving revenue growth and connections growth, we're also focused on the efficiency side of the business. We set a target for taking out \$10 billion of cumulative cash expense over the period from 2018 through 2021. So we're halfway through that 4-year period, and we've realized \$5.7 billion in cumulative cash savings over the first 2 years. So we're on track to deliver against that goal.

Last year, one of the primary drivers around the cost efficiencies was the voluntary separation program, which saw us take 10,000 people out of the business. And as we look at 2020, we'll continue to be focused on improving our end-to-end processes. The benefits will come from the VBG transformation that we've talked about in Tami's business and further enhancements of our sourcing and supply chain operations.

So the revenue growth and the focus on the cost efficiencies provides the basis for our guidance for 2020 where we expect to see accelerated growth in both revenue and earnings.

On the revenue side, we expect low- to mid-single-digit percentage growth year-over-year versus the 0.8% we produced last year. Obviously, service revenue is the biggest factor in that guidance, but also a reduction in the headwinds from media, which in the fourth quarter of last year was basically flat on a year-over-year basis, the best performance we've had since the acquisitions; and a reduction in the headwinds from wireless equipment handsets. In fact, the guidance assumes that we will see an increase in wireless equipment revenue for the first time in a few years.

On the earnings side, we expect 2% to 4% growth compared to the 2.1% we produced in 2019. And the vast majority of that increase will become above the line as we expect our tax rate, depreciation and amortization to be relatively similar to 2019, combined with a reduction in interest expense.

And on the CapEx side, we expect similar CapEx, \$17 billion to \$18 billion, that we guided last year. And that's a result of the efficiencies that Kyle mentioned, allowing us to stay within our historical capital intensity while increasing the rollout of our 5G Ultra Wideband network, continuing to deploy One Fiber in more than 60 cities across the country and updating to our new Intelligent Edge Network architecture.

And so we have good momentum in 2020, and that's before we see the benefits of 5G reflected in our financials. At this event a year ago, we gave targets for 5G Home, 5G Mobility and 5G MEC, and I'm proud to say we delivered against each of those targets. We launched our first 5G Home market on the global standard in Chicago in October. We turned 5G Mobility on in 31 cities, and in December, we announced our first 5G MEC platform with AWS. And as you heard from Hans and Kyle, we have targets for 2020, including for 5G Home, get in the next-generation chipset into our CPE in the second half of this year; on Mobility, another 30-plus markets, combined with bringing at least 20 new devices to our customers and bringing DSS into the marketplace; and on MEC, adding 10-plus locations during the course of the year. So by hitting those milestones, we'll be in a position to see contribution to revenue growth from 5G in 2021 from 5G Home and Mobility with revenue on the business side starting in 2022 and growing from there.

5G Built Right provides us the platform for sustainable growth throughout the new decade. And as we've grown earnings, it's allowed us to strengthen the balance sheet. A year ago, we provided the leverage target. Net unsecured debt-to-EBITDA, we want it between 1.75 and 2.0x, and we're now near the top end of that range. And that's consistent with the commitment we made when we did the Vodafone transaction to return to an A- credit rating profile. And our performance in 2019 allowed us to work against all 3 of the capital allocation priorities. We invested in our business, whether that's CapEx, we bought spectrum and we had disciplined M&A. We also increased the dividend for the 13th year in a row, and we strengthened our balance sheet.



So recently, as you heard Hans mention earlier, we added the fourth priority to our capital allocation model, which was said that we would return excess cash to our shareholders once we've met the first 3 priorities. And when we spoke about this on the earnings call a couple of weeks ago, we said there was a couple of areas we wanted more clarity on as we think about the timing of when we get to the fourth priority. And last week, we got some of that clarity. When -- we're very glad that the FCC announced the timing for the C-band auction. We expect that to begin in December of this year and not be in next year, as some people had suggested it might be. So because that auction will begin this year, we now do not expect any material buybacks during the course of 2020. But our long-term goal remains to have our balance sheet within the leverage target and to return excess cash to our shareholders.

So in summary, we have good momentum in the business driven by service revenue growth and our work on cost efficiencies that we expect to drive accelerated growth in revenue and earnings in 2020 with the benefits of 5G still ahead of us and with strength in the balance sheet. So the business is healthy with exciting times to come.

Thank you for your time this morning. With that, I'll turn it back to Hans.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you, Matt. And before we go into the Q&A here in the room, and — I just want to point out that we have the full leadership team here. Well, Craig is the Chief Legal Officer, but also supply chain and real estate; Matt, you just listened to; Diego, Chief Marketing Officer; and Christy, the new HR head for Verizon; Tami, of course, running the Verizon Business Group; on this side, Kyle, you have listened a lot to; Guru, running the Verizon Media Group; Ronan, the Consumer Group; and Rima, the Head of Strategy and partnership. So they're all here and whatever questions you might have for me, I'm going to delegate to the right person if I don't take it myself.

So we have runners with microphones there. So you start, you run.

QUESTIONS AND ANSWERS

Michael Rollins - Citigroup Inc, Research Division - MD and U.S. Telecoms Analyst

Mike Rollins from Citi. Two questions, if I could. The first, with regards to the comments around the C-band spectrum, so given the time line that the FCC -- and process that the FCC has outlined, how should investors think about how quickly Verizon could deploy the spectrum if it were to win spectrum in the auction?

And then the second question is just back to the One Fiber initiative. You mentioned 30,000 route miles at the end of 2019. Can you frame the size of the end goal of the Fiber program? And what would lead you to accelerate the pace of deployment for both the access network and for the business customers?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you. On the first one, first of all, as you have heard from Kyle and from me and Matt, we have all the assets to deploy our 5G strategy right now. But I also said that the C-band is a very good spectrum when it comes to global roaming as coverage. So of course, we are interested in that. We were very encouraged about the FCC's announcement recently. And there's a couple of things probably more to be done, but definitely, that they want to auction it out this year.

When it comes to our plans for using that and the time lines, it's a little bit too early to talk about. But I can tell you, we will be prepared for it, if we will be the winner in that auction. The team that is working with Kyle, he told you that they are 18 months ahead, all the time thinking about what they need in a network. So we will be working with ecosystem that we always do and prepare ourself.



Anybody wants to add something? Looking at my team.

Second question on fiber, the size of it. Yes, 30,000 route miles. We reported last year a couple of quarters that we're on 1,500 route miles a month, up to 1,700. I think we have reached the sort of the volumes that we have, Kyle said that. But -- and we are addressing some 60-plus cities right now. After that, we continue with our disciplined work of return on investment, is it better to lease or building ourselves? And that's a continuous work, what the team is doing. But right now, the focus is really to get those vast markets covered because that is giving you -- us the opportunities in the pyramid you saw. That's the best return on investment we can have. If we get -- if we have equally good return on investment going further on, on fiber, we'll do it. But right now, the focus is on that piece.

Matt, do you want to say something, please?

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

The only thing I'd add is just as you think about the rollout, you asked around the timing of how far that keeps going, and Kyle, you can jump in here as well, so right now, you still got a lot of the core in each of those cities being built. That doesn't have -- over the course of the next couple of years or so, you'll see that get completed, and then it becomes more success based as you go up that pyramid stack. So as you think about the timing of the capital intensity within the fiber build, it will continue over the next couple of years, in line with what we saw last year. And then we'll be moving to more of a success-based model over time.

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

Yes. To -- we have to pace it together with the 5G rollout, along with the iEN and all the electronics and everything in the modernization we're doing there. So we've got to pace all these together, and so -- and stay within our capital envelope, right? So that's what we're doing. We're going to drive the most return on it. We're going to the places that we think we can get the most return on the initial investment. And then as we grow, we'll just keep going on.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Next. Just ask, who has the microphone? There. Simon.

Simon Flannery - Morgan Stanley, Research Division - MD

I'm Simon Flannery, Morgan Stanley. The judge in his ruling talked about DISH's build as being something that gave them confidence in allowing this merger to go through. I'd be interested in your perspective of how you think about a new player and maybe bring Kyle in, in terms of the virtualized model that they're talking about. So how do you see that playing into the competitive environment?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

First of all, I have no comments on the judge confidence on what he knows about building networks, if that was a question to me. Secondly, there are a couple of guys that have pretty good knowledge about building networks around this table. I would say, if you build a greenfield, you can build a network a little bit differently, for sure, virtualized, et cetera. That's no debate. And it could be a little bit more cost efficient. But what people tend to forget is that small -- remember where I came from. A smallest value of the site is the radio. That's the smallest value. It's -- unfortunately, when I worked at Ericsson, that was also decreasing all the time. The big cost is actually the labor, the fiber that needs to be -- the towers, the concrete and all of that when you build. To be honest, the price pressure on those items are fairly low. So I think that you need to factor that. And the radio is doing it virtualized, it can have some merit. But in the totality of the cost, maintenance cost, building sites, that's peanuts.



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

Yes. I mean from my perspective -- yes -- no. Hey, listen, virtualization is fantastic. We've been doing it for a long time. It's part of our iEN. There are certain parts of the network that are virtualized, and it's beneficial. There's other parts that we've learned over the last couple of years that doesn't even make sense to virtualize. And virtualization doesn't help you at all at the permit office, right? So when you're trying to go get permits to build towers, you're trying to hang antennas, you're trying to put fiber in, all these things, Brady calls it the knuckle dragging, right? That's what we're good at, that's what we've honed in on. So yes, virtualization is good, but it's not end all be all to deploying a network.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

And one very important asset in virtualization is the fiber because you need fiber in between everything in order to be able to transport the data. If you do a baseband hotel or whatever you want to do in it, so the fiber is being extremely crucial when you build it in order to do it. But again, I have no idea about the plans of DISH, what they're doing. I'm just talking in generic, what I have seen in my life of building networks.

Jennifer Fritzsche - Wells Fargo Securities, LLC, Research Division - MD & Senior Analyst

Jennifer Fritzsche with Wells Fargo. I wanted to ask a question -- two, if I may. Also -- maybe also the changing competitive environment with T-Mobile. They have not been shy about taking pot shots about you guys advertising against them. And now with the big empty airplane of spectrum, do you expect to lean in during this period of integration and try to poach those subs that might be up for grabs?

And then secondly, if I could, backhaul. It sounds like a lot of the fiber you want is owner economics. What does that mean for your current backhaul partnerships?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Okay. On the first, first of all, as I said, I feel very confident about the model that Ronan and Tami has on the wireless side. We have built that during 1.5 years. It's not that we're going to have any super reaction, we're going to do this and that. We have a model that we've already developed. And as you've seen, it's also a very successful model. So we feel good about how we can compete in this market. And to be honest, I have no idea how T-Mobile will want to compete. But what I know is that we have a good preparation. We take out cost, we build the best network, and we have changed the whole way actually how we can work with customers. But maybe Ronan wants to say something? And I will come back to your backhaul partners.

Ronan, say something. How do you feel?

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

Good morning, Jennifer. So look, a couple of things is that the strategy that we're executing, we've been on for a while. In fact, in the consumer group, you can really mark it back to the late 2016, beginning of 2017. We don't spend a lot of time talking about our competitors. I think what you're referring to is the fact that they wanted to run an ad to talk about our network, so we had a little fun at their expense, but that is not the core of what we're doing. The core of what we're doing is we're offering customers true value, which is choice built around experience and quality, and that's something that we think fundamentally differentiates us from others. We're also doing it in a way that we give much more flexibility to our customers, whether that be on wireless with Mix & Match where we're now in the second generation or more recently as we've introduced to the Fios footprint component pricing, allowing the same flexibility. So I think we're positioning ourselves to build around the strength of our network, the strength of our customer experience, the strength of our distribution, our billing platforms and our customer service, and I think that's what ultimately differentiates us from the competitors. So I'm happy to take it on.



Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you, Ronan. I bring up a partner here when it comes to the backhaul.

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

Yes. So yes, we're -- we still use the backhaul providers. They're an important partner to us. They have assets in the ground that we're happy to utilize at good pricing. So just because we're building our own networks and network economics, we continue to do that. It's -- but Rome wasn't built in a day. We have other things we need to satisfy. So when it makes sense, we partner with those folks, and we do a lot of business with them.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Okay. Microphone is with whom? Over there.

David Barden - BofA Merrill Lynch, Research Division - MD

Hans, Dave Barden from BofA. Matt referenced an elevated amount of equipment revenue expected to contribute to revenue performance this year. Presumably, that's related to an expectation of a 5G handset upgrade cycle in the back half of the year, which I think we all expect. And with that, we expect a big kind of marketing tussle between all the carriers. T-Mobile has been deploying a low-band layer to say that they have 5G everywhere. AT&T is refarming their 800 to say that they have 5G everywhere. I'm not clear what Verizon's plan is yet in terms of trying to say that they have 5G everywhere because you're going to have the millimeter wave in the metro core, you're waiting for DSS at the right time. Is that right time going to be when we have a 5G iPhone? I'm not sure what...

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

There was a reason why we didn't say exactly a date, you know. So I'm not sure I can really answer your question, but again, we would be prepared to launch that when we think that there's enough phones in the market and commercially it is the right time, and that's what Kyle is preparing. So -- and secondly, we feel good about our models. If it's going to come out new type of phones, which I cannot comment on, that's going to drive the market. I think we have a model, how we can work with that and how we can bring our customers from the metered plan into unlimited and to unlimited with millimeter wave. We have already paved that way. We have already mapped it out. And so I think we feel good about that if it happens.

You want to say something, Ronan? You will keep the microphone?

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

The only thing I would say, Dave, is that we took the opportunity earlier to talk about the fact that we will have a broad range of 5G devices, 5G-millimeter wave devices available to us next year. We also see the evolution of 5G handset pricing. I've been clear and said I see below \$800 in the first half of the year, below \$600 by the second half of the year. So what I would say to you is as and when the customer cycle happens, I think we are very well prepared. But fundamentally, we have a differentiated proposition, which the others won't necessarily be able to deliver in the same time table.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

And you have said also that we're going to have plus-20 devices with 5G-millimeter wave this year.



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

Yes. Exactly.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

I'm just helping you. Okay. Who is next? Who has the microphone? Over here.

Unidentified Analyst

A couple of questions. First of all, on...

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

A couple of questions?

John Hodulik - UBS

I'll make it quick. First is on margins. You guys talked about low to mid-single-digit revenue growth and the -- or the majority of the 2% to 4% earnings growth coming above the line. What does that mean in terms of wireless margins? I guess, to a certain sense to Dave's question, does it anticipate increased competition? And I would imagine you'll see improving results on wireline, but how do you see the wireless margins shaping up?

And then just finishing up the buybacks. You talked about after the -- you get some visibility on the C-band auction. Do you guys got to get back down to below 2x from a leverage standpoint after you've paid the price tag for the spectrum?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Okay. On the first, I will take some help from Matt. But again, I mean, how we see it, I mean, we are trying to improve all our business. Of course, wireless is very important, but as Matt said before, I mean, Verizon Business Group is an important part for our EBITDA as well as Verizon Media group as well. I mean if -- they just improve as well, that's part of it. But of course, wireless is an important piece of it.

Matt, anything more? And then you can add on the capital allocation.

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

Yes. So I guess, I'd be remiss not to mention that, of course, we won't have a wireless margin in our reporting this year, as you think about that. But look, as you think about how do you get to 2% to 4% EPS growth with most of that becoming above the line, it's the combination we expect to see further benefit from cost efficiency work with service revenue across both business, and consumer being the driver there. We saw 3.2% last year, we would expect to see a good number again this year that would drive most of that. So I would expect to see -- if you -- if we had wireless service margins, I would expect to see a continued strong result.

And look, I know -- within that question, going back to the prior question is, okay, so what happens if the handset cycle is larger? And as you saw from the revenue guide, we assume an increase in wireless handset revenue this year, which means we expect to see, especially in the second half of the year, an uptick in that activity, that's baked into our guidance. As you think about that upgrade cycle, you should expect us to take the view that says, if we have the opportunity to add customers that create long-term value as a result of having the best network experience, we'll do that, but we'll do that in a disciplined way. The base, as I say, creates the best long-term value for the business. So that's the wireless margin.



Talk about the balance sheet and the buybacks?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Yes. Yes.

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

So look, we said and we very deliberately put the priorities in that order. And the first priority of our capital allocation model is investing in the business. And obviously, year in, year out, that's CapEx, you see that in a consistent fashion. But then, obviously, it also includes spectrum, and that's not consistent from year-to-year. So we have an auction coming up later this year. We'll see the outcome of that. But then as you think, when do buybacks start, as I said, it's after the first 3 priorities have been met, and the third priority is getting back into that range. So we're very close to the top end of that range now. We'll make progress on that with the operating cash flow this year. We'll see what the investing in the business number actually is, and then we'll have more clarity going forward.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you, Matt. Okay, we get more questions. Yes, sir?

Tim Horan - Oppenheimer

One quick one for you, Hans, and one for Ronan. Can you talk about how the millimeter food chain is kind of developing? What other countries you expect to see a millimeter wave deploying in just a supplier food chain?

And then, Ronan, are you more open to other reseller partners like you have with the cable industry? There's some thought that maybe DISH is courting Amazon. Would that be something of interest to you?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

So on the millimeter wave ecosystem, of course, U.S. is a big market than many. It seems like everyone has millimeter wave here. Of course, we have the most. So that's a good market, usually drives a lot of ecosystem. But other than that, the southeast of Europe have been auctions. We see Asia coming out, and I think we're going to see more market. And the interest we have from carriers all around the world on what we're doing with millimeter wave and what they see, how efficient that is -- that spectrum is, I would guess we're going to see much more coming -- in the coming years. And as Ronan said, all the devices we're going to arrange -- will have millimeter wave already this year on 5G. So clearly, this ecosystem that very few believed in a couple of years ago, I think, look at this team, this team has actually made it happen. I think this is a fantastic job and is really playing into our main strategy and an asset that nobody has had and a competence that very few else have.

Ronan?

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

So I just finished my -- your point on emphasizing this idea that our focus will be on broad distribution of millimeter wave-capable devices. I think that's an important part of seeding the ecosystem because we believe that's the best way to demonstrate the differentiated opportunity that 5G offers. When it comes to wholesale, it's very clear, and Hans had it on his first slide. Network as a service, network as a platform is an important part of our strategy. Our premium offering is our Verizon-branded offering, but we also value the strategic partnerships we have in wholesale and MSO. If there are opportunities in the marketplace, we will look at them on their merits. What I would say to you as a broad point is we look at opportunities



that identify differentiated offerings in the market, suitably segmented offerings in the market. As regards sort of broad offerings in the market, I think we're very comfortable with the strategic partners we have today. So we'll be open-minded about opportunities that come, but I'm certainly not chasing entrants into the market. What I am doing is focusing on the quality of the relationships I have today and identifying unserved segments within the marketplace.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you. Okay. The microphone is with Walt.

Walter Piecyk - LightShed

Can you just expand a little bit more on C-band on a number of things because I think in the past, Eddie Chan and others have said 60 to 80 megahertz was the amount of spectrum you'd want to do a proper 5G NR build.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

So Ed had said that.

Walter Piecyk - LightShed

Right. So Kyle, I think, just talked about macro towers being the same this year versus last year. I think you've actually been reducing. So I think that's maybe a new macro strategy, maybe I'm wrong. Just talk -- and also the fact that the payments themselves are not going to occur until 2021. So you're talking about a balance sheet when the payment is not actually -- I don't even know if it's coming in 2021 or when you're clear. I don't think anyone really knows that. So -- and at \$10 billion, that's a 1/4 turn of leverage. Fourth layer of this, again all C-band, is you made a big deal about saying -- maybe not you, but Lowell, we walked away from AWS 3. Does the same theory hold true for C-band in terms of if those prices get too high that you walk away from that auction?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

That was a lot of questions inside there. I will try

Walter Piecyk - LightShed

So expand what you want on C-band.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Okay, okay, okay.

Brady Connor - Verizon Communications Inc. - SVP of IR

And Hans, we're not going to give up the strategy on C-band.



Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

No, no. No, of course, not. Thank you, Brady. I think that we will do the same calculation as we always do on data traffic. I mean that the team is doing every time, densification versus return on investment and all of that. That's no different from how Verizon has operated in last 20 years when it comes to data traffic. And as Kyle so elegantly explained, it's many pieces of how you deliver the best experience for our customers. Again, what -- I've said it, I think C-band is a good spectrum. So I still believe it's an important -- but we will do the same process. And to be honest, there -- I've been around in all 180 countries in the world, just to be clear on it, and worked with all carriers. There are a lot of carriers that have a lot of spectrum but a (expletive) network. So that's not the only reason that you have a good network. And if you look at these guys, I'm super impressed.

Anybody else want to speak about C-band? I -- that's what I have. Matt, say something.

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

I think you're right. We'll approach it the same way we have other auctions. But the dynamics in every -- as we think about the payback on different layers of spectrum are different depending on the dynamics of it. So we look forward to the auction starting and, yes, seeing how it shakes out.

Unidentified Analyst

So is the 60 to 80 still important or not?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

The amount of spectrum?

Brady Connor - Verizon Communications Inc. - SVP of IR

Well, we're not going to get into it.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

We are not into guiding exactly what we're going to look for. We're going to follow the auction rules, which is just to be developed. I mean we are 2 days into this massive idea from FCC. So I don't have any more comment on it, to be honest. If nobody else wants to comment on it. No, nobody else wanted to comment on it. Okay. Great.

Craig Moffett - MoffettNathanson LLC - Founding Partner

Hans, Craig from MoffettNathanson. Can you -- I think you have said that you'd really -- that the MSO relationship is very important to you. AT&T has indicated a willingness or an eagerness to try to supplant you. Can you just talk about where that process is and when we might hear more?

And then a separate question. Just can you give us some insight into what happened with wireline margins last quarter and how you think about sort of correcting the decline from last quarter?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Yes. On -- you're absolutely right. As the network as a service has built out, our relationship with MSOs is an important part of that business model to get the best return on investment on our network. My read is that we have a good relationship with MSOs. We treat it as a very important



enterprise customers, as we would do with any enterprise customer, is give and take, and we do that. So I think we're in a good spot. I feel good about it, but I'm not sure, do you have something to add, Ronan? Ronan is handling the MSO relationships.

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

So I would just kind of repeat what Hans said and my earlier comment is, we have a very clear strategy, which includes partnering in wholesale MSO. We have been very focused on that for a considerable period of time. And I think that's reflected in the quality our relationship. Some people have woken up more recently to the fact that there's a wholesale market out there. We've been doing this by delivering the best-quality partnership that's available in the marketplace. That's the focus to continue.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Yes. On the wireline margin, yes, you're right. I mean, first of all, we have the secular decline on wireline business. So our job is twofold. We see a great opportunity because we are the best -- have a fantastic distribution channel of these enterprise customers serving, I don't know, 96%, 97% of the Fortune 500. And they are, of course, buying this type of wireline services. So important for us, how can we leverage that when we go into One Fiber and 5G? That's why we both have sort of a little bit decline in the -- secular decline in wireline. And then we do investments in order to be able to deliver to these customers. Remember, we had wireline and wireless, we had several different go-to-markets with our own employees, with other, with third parties. We just need to get the tools and the products that we now can have, that's the investment we're doing. So again, I think we are sweating the wireline asset, but we're using it to leverage for the future. That's really how I think about it.

Maybe, Tami, wants to add something, running the business. The microphone there, Tami?

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

Yes. Thank you for the question. And as we've had a chance to bring together all the assets of wireless and wireline for how we serve small and medium customers, how we serve global enterprise and how we meet the needs of public sector, the opportunity is actually bigger than we thought it was as we've had a chance to talk to those customers about how we meet their needs for a digital transformation journey. And as we've looked at the assets and said how do we most effectively accelerate our readiness to serve those customers, it does require that we make investments in our billing systems, in being a digitally equipped business so that we can expand our distribution, simplify our overall product portfolio, both in terms of retiring products as well as building new products and capability, and then do a pretty significant workforce transformation in terms of upgrading our workforce. We're moving from selling circuits and boxes to selling and enabling solutions for customers as they go through that digital transformation journey. And so bringing those pieces together, building a very solid foundation so that we can deliver great customer experience today, accelerate our quote-to-cash process, which has been a very long cycle, and then really make sure we're effectively prepared to scale the opportunity that 5G represents is really the opportunity in business. And it is bigger than I could have imagined a year ago sitting here.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you, Tami. We have already answered the questions. Okay.

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

Hans, Mike McCormack, Guggenheim. Just a quick question on 5G. How do you guys think about monetization of that? As we think about the consumer business and the business to business, is there a surcharge? Can you actually do that in a competitive marketplace? And then as you think about the enterprise, what are the different opportunities there?

And I guess, lastly, just on the 5G Home. Any data points there you can share? Or are we going to hear any more on a going-forward basis?



Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

So I think we're -- we have a pretty clear strategy on how to monetize. I think on the consumer wireless, I think Ronan has talked about. Again, we have 50% on metered plans. We have different unlimited plans. And of course, to enjoy the 5G-millimeter wave, you need to be on the highest plans. So you see the opportunities, of course, of how we can actually create value for our customers but also value for ourselves in that. And that's the model that was already deployed 1.5 year ago, so it's nothing new, but it's just great.

And then, as Ronan said, then we have other vectors with -- including prime content or music or things like that, that can also enhance that in a partnership. There is a win-win for us. I think we have a long runway on that, both for 4G and for 5G.

When it comes to 5G Home, we have had our initial pricing out there, so you know what we're able to do and guaranteeing 300 megabits per second. I think that we will continue to elaborate on that, especially between on our Mobility case and Home case, but I think that you should stay tuned for how we do it. And I also see how we can add in other services in order to get a much richer Home experience. So that's how we plan to do there.

On the 5G mobile edge compute, I think the first pricing model on public is already out because, basically, you can already right now, with approval from Amazon, actually start developing straight into our 5G mobile edge compute. And of course, they take care of the front end. We have a rev share with them, so that's what also -- so we have already that down.

When it comes to the private 5G mobile edge compute, it's going to be a little bit more customized because then you build a 5G network, a private 5G network for 1 big enterprise. And then it depends on what they're going to add in, et cetera. And that's what Tami talked about. We go from bookselling to actually solution selling with partners. So that's going to be more iterative process, as is normal in large enterprises.

So those are the models we have. We're probably going to see much more in the years to come. But I think I feel good about how we have been thinking about this in order for scale value for our customers and scale value for our shareholders and Verizon.

Okay. Everybody was happy with that answer? I look at my team.

Will Power - Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst

Yes. Will Power with Baird. So Hans, when you were talking about growing the core business, one of the things you mentioned, which you just brought up again, is the fact that 50% of your customers currently aren't on unlimited today. So aside of 5G, what are the incentives you plan to put in place to move those customers to unlimited? And what does that mean from a network capacity standpoint? I mean how do you think about balancing that?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

First of all, I feel really good about the network capacity. We have — as Kyle showed, we have more capacities. We can do everything that Ronan wants to do to see that we are moving our customers to unlimited. And again, it's a good proposition for our customers instead of being metered. So I think that's the most important, and then we can offer them the best network.

Then, Ronan, if you want to add something, but we have, of course -- you have seen what we have done this year on unlimited with new unlimited in order to bring 1 unlimited offering down, so the metered customers can actually get into unlimited. We have added everything from music to Disney+ and all of that. So we have array of potentials and products we can add here in order to attract our customers going into that.

Ronan thought it was a good answer.



Brady Connor - Verizon Communications Inc. - SVP of IR

We actually have time for one more.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Thank you, Brady.

Brady Connor - Verizon Communications Inc. - SVP of IR

Saved the best for last.

Jeff Kvaal - Instinet

That's kind of you, Brady.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

The pressure is on you.

Jeff Kvaal - Instinet

Seriously, Hans, I got to try and measure it up, but I'm not sure I will. But I do have a follow-up, Matt, for you and then a second one. In your guidance, you were talking about accelerating overall revenue growth. It seems as though you gave us some flavor about outside of the service revenue growth about what's going to be better media and handsets. Do you think that the service revenue lines in business or consumer or however you want to describe it at the moment are going to be growing better or slower in 2020? And then I assume that you're thinking that whatever 2020 is, 2021 should be better. Is that fair?

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

Well, I'm not going to give guidance for 2021 today. We'll deliver on 2020 first. But as you think about within the revenue guide, as you break apart the different components, and I mentioned that there were some headwinds a year ago. Media was down 3% for the year as a whole in '19 versus '18, but you saw significant improvement throughout the year, starting negative 7% in 1Q and essentially flat in 4Q. So that should be a different proposition as you think about the year-over-year number in 2020. We've talked about wireless handset revenue and the expectation there. Within service revenue, and we didn't break down exactly the number within the guide, but certainly, an expectation that we would see a continuation of momentum. When you think about the 1.4 million phone net adds that we had last year, the vast majority of those are in the back half of the year, in fact, in the fourth quarter of last year. So you didn't have many of those billing last year, you'll have that carry forward. As we mentioned, about the ability to continue to step customers up to unlimited. The service revenue growth we saw in business, 6.7% for the year. It was 7% in the fourth quarter. So the jump off momentum into 2020 was very strong there. So I would expect to see wireless service revenue continue to be very much accretive to the top line.

Jeff Kvaal - Instinet

Okay. And then lastly, Hans...



Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Another one?

Jeff Kvaal - Instinet

Well, you can punt this to Kyle, perhaps, I guess. But you have both talked about CapEx efficiencies, and so I'm wondering if you could spend a little bit more time about what that means. Are there areas of the network that are kind of in out-of-investment-cycle phase at the moment?

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

Yes. I can start, and if you come up. I mean, remember, I had the pleasure to actually be CTO for 9 months, it was probably too long, but I was there. And together with Kyle and with Matt, we redesigned the whole capital process, and that we did together with doing the Intelligent Edge Network. That is still half way through it with all the sort of redundancy we had created with different networks. So that's why you see we're doing so much more in the same capital envelope. I mean the team of Kyle, they are doing a fantastic job to get the best network and actually being very consistent on capital allocation and then getting even more stuff out. So I think that's what I've seen, but you can give even more.

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

Yes. I mean there's easy stuff like negotiating harder with people, right? I mean that's one lever. But we also use process and technology, and we leverage the technology where we can. One thing I like to use is our multi-service edge routing platform. I can do so much more with that piece of gear than I can with the historical gear, it just creates so much more efficiency for us. And then as I bring all these networks together, when they were separate under the different customer-facing business units, we couldn't get any synergy. Now I can put an MSC router out there and it can serve all customers. And once again, it's all really about driving utilization. If I keep -- if I put assets out there, I keep driving utilizations up, I could be much more efficient with my capital spend, and I can redeploy it in other areas of the network that are growing. So...

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

And what we don't usually talk so much about is that Kyle also have all IT. And I can tell you that we have done enormously a lot of work in IT. And as you know, we even did an outsourcing for the first time last year, and with no disruption, but that gives us more flexibility.

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

We're open now.

Hans Vestberg - Verizon Communications Inc. - Chairman & CEO

And suddenly, we are actually working with architectural IT because we're now having that crossover. So there are plenty of places, which we are working at the same time.

Thank you, Kyle, and let me just quickly sum up. Whatever is on this slide is what I've said before during this time. So I think, hopefully, you feel that we're coming into 2020 with a strong momentum with everything we have done in '19 and how we have actually crafted the strategy and how we're now executing on it. I think the way, we call it the Verizon 2.0, changes because the 1.0 was pretty successful, actually. And as you might know, this is — this year, we turn 20 years old. Verizon is 20 years old. We are not older than that. Some of you can feel that we're very old, but only 20. And of course, the 1.0 has been very successful. And now the 2.0 where we are really committed to continue that work. That's why we have done all the changes we have done in order to prepare us for the future.



I think the 5G is clearly a growth engine for us going forward. And you can see what we're doing here, and we have spent a lot of time on it. And basically, all our units is included it, of course, business group and consumer, but also Verizon Media group, doing a lot of content work and applications now on 5G, which is a great asset to have. And not only that, a lot of the people in Verizon Media Group are excellent in data center, artificial intelligence, machine learning. And all of them, they are working with Kyle today. So you have to see, this is coming together as a group strategy.

And then, of course, we talked about the capital allocation and operational efficiency, we will not leave that. And ultimately, we also drive a purpose-driven company with a strong focus on society and responsible business in all. You see that we are actually giving all our stakeholders the best and the longest -- the best value long term. So all in all, we think we're in a good place going into 2020 and beyond.

Thank you very much for the people in the room, and thank you, everyone, on the webcast. And by that, I'm going to hand over to our imminent and fantastic Head of IR, Brady.

Brady Connor - Verizon Communications Inc. - SVP of IR

All right. So just housekeeping from here. So hope you enjoyed the first session. We've got a break scheduled, and then we have 3 excellent breakout sessions where you guys can dive deeper into each one of the business units: Consumer and Media, Business and Partnerships and then the Technology group. If you take your badges and turn them over, it'll tell you which -- what your schedule is for the upstairs section. It's on the second floor. We have people to help get up there, but we do have 15, 20 minutes for a break. You can catch some of us. Grab your favorite Verizon person for extra questions. And then on the way out, after the breakout sessions are done, we have an informal boxed lunch down here, and 30 minutes for you guys to catch us on the way out the door. And we'll have everybody out by 1:00 this afternoon.

So enjoy the breakout sessions upstairs, dive deeper a little bit with the team, and catch us on the way upstairs and we'll get going.

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