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PRESENTATION

Andrew Beale - *Arete Research Services LLP - Analyst*

Welcome, everyone, to Arete's Tech Conference today. I'm Andrew Beale, and I cover the telecoms, cable and media players. And I'm delighted to introduce Sampath, who is CEO of Verizon Business, as our first speaker.

Sampath's business division serves I think 97% of the Fortune 500 as well as many federal and local administrations of global businesses. In fact, I think he's in Paris seeing customers at the moment, and it generated revenues of $31 billion in 2021. He brings 20 years of experience or more than 20 years of experience in digital transformation and critical network infrastructure, extensive knowledge of all the products as well as relationships with major business customers. I'm sure I can add much more, but a very warm welcome.

I think we've got a safe harbor slide coming on screen, but perhaps you'd like to add some words about forward-looking statements.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Andrew, thank you. It's so good to be here today. Before we get started, I would like to draw our attention to the Verizon safe harbor statement. A copy of which is here but if you don't get to the full text, it's on the Investor Relations website. My comments today will include some forward-looking statements, which are subject to risks. Actual results may differ materially, and details can be found in our SEC filings.

Andrew, with that, I'm all yours.

QUESTIONS AND ANSWERS

Andrew Beale - *Arete Research Services LLP - Analyst*

Perfect. So today, I really want to spend most of our time digging into some of the newer and developing initiatives such as fixed wireless access, private 5G, MEC and so on. But I thought I'd start by asking for your unique read on the economy. And whether that's from a small business or a large enterprise, what sense do you get about the direction of travel for the economy?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. We have a pretty unique position in the economy. In the U.S., we serve 1 out of every 2 small businesses as their primary partner. On the global enterprise space, almost 97% of them are customers more than 1/3 of them, we are their primary partner. So a very large sample set. So I'll break down reactions into 2. On the small business side, business formation is very small, is very strong. It's been like that for the last 4-odd quarters. Good, strong business formation, employment underneath that remains quite strong and robust.

Second thing we are seeing is digital investments by small businesses are doing very well. And I see that in terms of new use cases they put on the network. A local deli that serves sandwiches. Now you can do ordering via phone. They have curbside pickup, and you multiply that by every new business there. So good investment in digital, which is a combination of SaaS services as a core connectivity that we have there.

We do see some early signs of shaving on the small business side, which is a little bit of cost cutting, not taking away core functionality, but where possible, do some cost cutting, which is kind of typical at the end of an economic cycle like this as we've seen it before. But small businesses remain very robust. On the global enterprise side, a slightly different picture, digital investments around digital transformation, cloud migration are as aggressive, if not more than ever before. But a lot of passion projects are at an all-time low. So putting people on Mars, crypto, Metaverse, projects in that nature are definitely an all-time low right now. They're going to focus on bread and butter more aggressively. Cloud migration continues robustly. We see that because network is the first call they make before they migrate to the cloud.

Lastly, we see decision-making in large enterprises has slowed down. Between the time we finalize the deal and get a solution, that time has increased probably 30 to 45 days in the last couple of months. But in the end, they do end up going through because our projects tend to be core to their business. But some of the more speculative projects are definitely on hold.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. Interesting. And is there a big difference between geographies in terms of Europe versus U.S.?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. U.S. we see continued investment as I said, across this. Look, in Europe, decision-making cycles are even longer. There is a sense of slowdown. Some of it has to do with inflation. As energy prices work its way through the machine there, they're reallocating budgets. And I think the big question is global aspirations. In a tough time like that, does Europe continues global aspirations for global MNCs or do they double down in their boundaries? So U.S. continues to be a good spot for us in the global economy right now.

Andrew Beale - *Arete Research Services LLP - Analyst*

Great. So let's also sort of paint the picture around the business division's core mobile business before we get into some of the newer areas. I mean, first on mobile, I think you've had very strong net adds and good service revenue growth despite starting with 45% market share or so. And I think it's even higher in public sector and you're facing competition from AT&T with FirstNet and also T-Mobile that wants share. So perhaps could you parse first for us how much of the enterprise wireless growth reflects the sort of hybrid working tailwind? And how long that continues, when it might slow and perhaps more broadly, what's happening in the SMB mobile market. I mean you talked about it a little bit already, but a bit more detail on that would be great.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. And that, look, we have a close to 45% market share position -- and the moat is actually getting a bit wider and deeper for us in the space. Global enterprise, we in fact, actually growing share significantly in that space. Public sector and SMB, I would say we are holding share in that. Now a couple of reasons. Let me tell you why the moat is growing wider and deeper and then talk a little bit about underlying growth trends. The first 1 is our network. Our network was built for business. Our LTE network and recently 5G network. LTE covers more square miles than any other carrier put together. So as a result, a lot of these networks were built for first responders for businesses in this market, and they like that piece. We also have deep integration with the network in terms of private networks. APNs and MPNs are integrated that work very well for us.

The second is distribution. You give me a DUNS ID, and I can tell you which account rep is mapped against that. We have a very, very detailed segmentation plan that goes down at the account level where we know who serves what accounts as well as scaling in direct distribution channel.

That takes -- it took us almost 20 years to get here. for some of our competitors, it's going to take a while for them to build this deep and wide a distribution that we have in this space.

The third is account services. Enterprise and small business accounts want to be served differently than customer accounts, the tools, the digital automation, the self-service, the reporting we do is very custom. And over the years, we've kind of mastered that. Those 3 remain the reason why our moat is wider and deeper, if you will. Now let me pivot your question around growth and what's happening in that space. Look, I think we did get some hybrid workforce tailwinds, if you will, everyone got those tailwinds. We took more advantage of it than the others.

But I think there are 3 factors at play. First is employment is pretty robust. Unemployment remains at sub 4 levels, and that's always a good tailwind for our mobility business that we see there. The second is regulatory and compliance. Increasingly, a lot of industries are moving from bring your own device as well as to share your consumer device with we need a dedicated enterprise device for you, banks, trading companies, insurance companies and others want a device that is fully end-to-end managed by our corporate environment and secured by a corporate policy. Yes, in some cases, it requires people to carry 2 devices, but we see that as a tailwind for our business because we've gone and tailored on that.

The third one, which I get more excited about is new use cases. Work from home did create that, but also new use cases in retail, in manufacturing and others where people bring more devices to add solutions. So for example, let's take a large supercenter for any of the retail, big retail chains. Earlier, probably 8 to 10 people had a connected phone in a store. It was the manager the assistant manager and maybe the key departmental heads. Now with most of the stores becoming distribution centers for e-commerce, curbside pickup, pickup in store. More of those associates tend to have devices. You see this play out in every industry, retail, health care, manufacturing, services. So new use cases are coming in. So a combination of employment growth, regulatory compliance and new use cases continues to have a fair amount of tailwind for the industry.

Andrew Beale - *Arete Research Services LLP - Analyst*

Interesting. So more penetration into all of these businesses as their models shift?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

And also we continue to take share. Look, I think there are 2 things at play here. One is the market is growing. And then we still have a very outsized share position in the market given our core fundamentals. So there are 2 interesting things happening at the same time that I want to just separate out here.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. Perfect. And then I think we should probably just talk about the sizable wireline business, although it's not really the focus for today. And that has been a bit of a drag for some time, principally with the shift from MPLS to SD-WAN. I mean, first of all, how far are we done in that transition? And what is the incremental revenue opportunity that you see in areas like secure web access, from fiber connectivities, your new fiber rings in more cities as part of the OneFiber program. And how far away might we be from stability in wireline revenue?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

You've characterized that quite well. Look, private IP, which is the bulk of our offering in the wireline space is getting transitioned from PIP, private IP MPLS to a more SD-WAN offering. But there will always be a home for PIP. We have a lot of -- some of it comes down to use cases. If you're running a large corporate office, which has customer applications. Remember, only 30% of all workloads are in the cloud today. 70% of workloads are in a private data center. I mean just in 7 out of 10 total workloads still don't sit in a cloud environment, which require custom level connectivity as well as really secure connectivity back to the head office and branch offices. So there will always be a role for PIP, and we keep adding to the PIP product in terms of feature functionality, more countries, more speed. So while there are challenges, that product is still a hero product for us.

The second is SD-WAN. Look, we are 1 of the early market leaders. We essentially kind of founded this segment 4, 5 years ago. We continue to invest in this space -- and it's -- that piece is growing quite aggressively, that a combination of SD-WAN plus SASE. And this is where our fixed wireless has played really well for us. We've never had in the U.S. a nationwide broadband solution. So we did get impacted because we lost some of that business to -- cable was able to leverage a national broadband footprint to do that. With fixed wireless, that's coming back. I know we'll talk about that a little bit, but I can't reinforce how pivotal FWA has been in kind of getting mojo back into that space. The third is cost out. As we continue to lose some revenue through the transition, how aggressively we take cost out of the space.

With that, I want to talk about OneFiber. It's a very project very close to my heart. I created it and ran it for many years. Look, we have 52,000 route miles. We continue to add between 1,500 and 1,800 route miles outside our footprint every single month. And the core thesis is we built this plant primarily for our own cell phone mobility coverage to get to backhaul. 50% of all our sites today have our own fiber, we sell, provision it. That number will keep increasing. I mean we'll end up saving $1 billion of annual run rate cost by 2025, just in doing that. But also in the process, we'll light up the prices around it. what we call the A-ring and the B-ring, 400 and 600 feet and then 1,000 feet outside the co-footprint. So those 2 between a cost element and a revenue are pretty significant drivers for us. But fixed wireless is also definitely a lever for us.

Last is, look, that business will continue to see some level of convergence as we move away from PIP. I don't think we are at the bottom of that yet. We've got a little more to go, but we've got a lot of work as I've actioned out here.

Andrew Beale - *Arete Research Services LLP - Analyst*

Yes. Sounds good. Well, I think that was a good segue into fixed wireless. And I think that's the first of the sort of big new growth areas that are coming. And this is a sort of here and now product that people are taking up. And I think we've all been -- well, perhaps not you, but we've been a little bit surprised about how much business take up there's been in fixed wireless relative to consumer, really quite a bit bigger than we originally anticipated. And I think you've got some new markets in SMB, like food trucks is the obvious example. But you've also got the enterprise ones that you mentioned retail chains like Walgreens, who are replacing regular store connectivity with fixed wireless. You mentioned the fact you've got national coverage that makes a big difference. So could you talk about this opportunity? Help us to size it a bit and also explain why business customers actually like the fixed wireless solution?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Andrew when -- last year when we had our Investor Day, we had committed to 1 million lines of business FWA by 2025. We're going to get there significantly sooner than that. Last quarter alone, we put, I think, 107,000 net adds and we're going to continue to see growth this quarter as well coming off of that high number.

Now when I break that 107,000 down, roughly 85% is primary connectivity, where this FWA is used as a primary connection option. Within that, half of it is pure cable replacement. We pull out cable, you put FWA pretty straightforward for us. The other half is new use cases that cable cannot get to. So you can kind of get a sense for why Cable is ex growth on broadband for the last couple of quarters because this is a significant dent in their business. Now why customers like us is, one is reliability. In the mean time the repair is low. Once it's set up, it's a super reliable service, quality is good. And also, it's the product -- we don't think cable is a business-grade product. A fixed wireless is a business-grade product.

So you can go this evening as late as 7:00 p.m. and order a fixed wireless access line, I'll have it up and running in your business by 8:03 tomorrow morning. 8:00 when the FedEx or UPS gets in, and 3 minutes to set it up and running. I don't need an appointment, I don't need you to block off four hours for the technician to come. And then lastly, we are integrated back with our SD-WAN product as well. So as soon as we do that, a lot of our customers use fixed wireless for SD-WAN, we integrated in it. We also have a managed services stack on it.

So it is a really robust product. And if you think about the economics, it's 2.5x the ARPU of a smartphone, and I don't have to give Apple any subsidy. So it's overall a pretty strong product economically, commercially as well as user experience is very high. Now last thing I'll say, cable historically has been a reasonably low NPS product. I don't recall exactly what the number is, but it definitely wasn't high. And we are running off that, and we have a pretty good NPS for our product.

Andrew Beale - *Arete Research Services LLP - Analyst*

Certainly interesting and that 2.5x ARPU of a consumer phone, I guess, is quite a significant uplift and obviously, a lot higher than you have on the consumer side, right?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Definitely, and look, it's a business-grade product. The box, we have pretty cute looking, but that's my word for it. Box that serves B2B -- it's a business-grade product. We've optimized it for our network as well for some of the band coverage we have, we have a millimeter wave product. We have a C-band LTE product as well. So a wide range, but that CPE has been pretty critical. Now look, half our customers bring their own CPE. We are very comfortable with that. We're partnering with whoever they want to work with. But especially in the low and mid-end of the market, our custom CPE that we've built is an attractive price point. It also gives you great performance.

Andrew Beale - *Arete Research Services LLP - Analyst*

Good. Good. Okay. So well, let's move across to private 5G, which is now, I think we're all learning about I think you've signed some marquee deals, Associated British Port over here in Southampton, BlackRock in New York, Mastercard and so on. So there does appear to be traction. I mean, I guess, can you start by explaining what benefits these customers get out of private 5G? Why is it interesting for them today? And what can it help them do tomorrow? And who is it that drives this push into 5G? Is it the corporate deciding that it's something they need to make a warehouse better or whatever it might be? Is it a compelling sales pitch that you're making to them? Is it a systems upgrade where they need to put in some IoT capability or something else? Where is it -- where is the demand coming from? And how does this play out?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. That's a lot in that question. So maybe you and I can go back and forth a little so I cover every element of that. At the core of the issue, it is reliable connectivity. 9 out of 10 times when we go in for a private network, it's like I have a solution, it kind of works, it's not reliable. And when the underlying use case requires high reliability, they invariably end up coming to private 5G. Associated British Ports is an example. They had 200-odd WiFi hotspots covering the port area. Think of it high metal environment, big trucks, big containers moving around. It wasn't a great experience. There were spotty coverage, there were dead spots everywhere in the business. And we ended up replacing it with less than 10 nodes. So in the process, they got a solution that was less expensive, more deterministic connection, higher reliability. We see that playing out every single scenario that we work. It starts with give me good high-quality secure coverage and then very quickly start branching out into use cases.

In the case of Associated British Ports earlier just wanted it for the scanners. Now they use it for computer vision, worker safety. In fact, recently, they import a lot of costs through that port. They're offering a service where you can use it to actually upload the new software on the car. So as soon it comes on land, it's already upgraded with the latest software. So new use cases.

And what we are finding, Andrew, is there is a convergence between operational technology and information technology happening across many sectors, manufacturing, logistics, warehouse, retail, where we see that happen. And private networks almost becomes the glue that stitches it all together between OT and IT because historically, as you know, those 2 domains remain separate. The CIO ran the IT domain and then the operations leader and the OT domain. Today, that is really converging. And in fact, most of our customers are actually operation leaders as opposed to CIO leaders. And that's a big shift even for us from a market go-to-market perspective and relationships, but it also shows some of our capabilities in this space.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. And so are the customers pulling or are you pushing or is it a balance?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

It is a balance, and I'll tell you where the balance comes from. Some of it is where we are pushing is awareness because they've had multi-decades of WiFi experience in the space. And now what is private 5G. Also, there's a perception that private 5G is significantly more expensive.

In fact, I'm going to stick my neck out, but not by much by saying private 5G over a 3-year period is actually same cost or lower cost than WiFi with a significantly better outcome. So when you have those -- so it's understanding the product, getting the cost equation. That's where we have to push it through. But the pull is pretty massive. They're saying, hey, I have all these digital applications in the warehouse, the pick and pack, the AGVs, the scanners and I have poor connectivity. I have to shut down the plant, have to shut down the warehouse. So it's a good balance between the pull and the push in this space.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. I think I've got a ton more questions in this area, but I'm going to fire a few. So first of all, sort of from an industry perspective, which industry seemed to offer the greatest potential for private 5G. What are the characteristics that sort of make you excited about an industry?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Let me do that because I think that's an important question. I think logistics, ports, transportation remains 1 of our biggest pieces. I mean if you think about it, there is 25 billion square feet of warehousing industrial space in the world, the U.S. alone is adding 400 million square feet a year. Europe needs another 300 million square feet of warehouse space over the next couple of years. There definitely aren't enough people to pick and pack your stuff in the space. So there's an immense need to automate most of these warehouses and at the foundation of that automation is just a strong network. And most warehouses have a very metal-rich environment, which means you need a deterministic network player, not a probabilistic player. So that's a big business for us, that and asset tracking.

Second is manufacturing factory of the future, but also retrofitting legacy applications, legacy PLCs with the 5G network so that they can all get on the same operating plane. Third is venues. -- for both stadium operations, venue operations, it tends to be a pretty large piece. I mean, you don't want your security system competing with your kid uploading the soccer game for their friends. So that's another area we are seeing a fair amount of demand. Fourth is retail, cashless checkout, grab and go operations. Those 4 tend to be the really big ones. The other ones where I see a lot of action is public sector and defense. We've gone and lit up a bunch of critical air force stations, Pearl Harbor in Hawaii as well as Air Force station Miramar, where we have these 5G networks that are customized for defense applications.

So those tend to be the big use cases and the big verticals, but it all comes down to reliable connectivity at the right price point and then increasingly use of new applications built on the base foundation.

Andrew Beale - *Arete Research Services LLP - Analyst*

In the new applications, this is computer vision. It's sort of factory-of-the-future type stuff. Which are the areas that are most exciting?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

First is vehicles moving around a warehouse. They need hyperlocal precision down to 1 centimeter, private 5G helps does that piece for them. The second one is factory automation. And to think about it as you bring reshored manufacturing, that's the easy part. Reshoring manufacturing is easy part, reshoring manufacturer at the same price point is a difficult part. You have to basically add 2x to 3x the automation when you bring and reach your manufacturing back from Eastern countries. And more and more companies want a similar price point yet they want their manufacturing very close to them. So a lot of investments in automation and robotics. And I'll tell you in the U.S. and Western Europe, we've lost the automation around manufacturing since for decades, we've had lower percentage of manufacturing as a percentage of GDP. So there's a revival of the sector right now, and we think 5G kind of creates the foundation of that space.

Third one, where we're seeing a lot is in retail. The retail experience has to change, whether it's AR, VR type applications in the store to make it come alive, make the experience come alive, but also cashless transactions are the big ones.

Andrew Beale - *Arete Research Services LLP - Analyst*

Very good. And unfortunately, there are competitors in this sort of space. So where is your real competition? Is it AT&T, T-Mobile, DISH? Is it AWS with their private 5G in a box? Is it the systems integrators? Is it all of these guys? Does DISH have any advantages for their public cloud native approach? I mean I think a few questions about how you see the competitive environment.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, it's a competitive landscape, but so is our core business. Our incumbent position is very helpful. So for example, if we are the primary connectivity partner to 10,000 locations in a large enterprise customer, it makes just perfect sense for us to build our private networks for the next 100, 200 locations. It doesn't make -- we are already integrated into the operating system -- we're already integrated with the ticketing system. It's just a logical extension of our core business. So incumbency has a very high role for us in this space, especially for mobility, if you will.

Look, we think licensed spectrum is a very critical enabler of this. We support both licensed and unlicensed spectrum. That's why we support the Ericsson product, the Nokia product as well as the Celona product. but customers we tell them, "Look, if you want something, then you're going to have to go for a licensed solution", and that's where carriers like us stand out quite aggressively.

Also, we are open to what type of spectrum we use, whether it's mid-band or millimeter wave. A lot of our solutions require millimeter wave, which we support. We have the device ecosystem and infrastructure ecosystem to do that. So it's a competitive space, but we feel we've done very well right now. We are probably on the top of the first inning. So we got a lot more game left and with a high share position and the fact that 1 in 2 mid-market customers, we are their primary -- more than 1/3 of the enterprise market is ours. It just -- and 45% of the mobility coverage is ours. It just creates a strong incumbency position for us because of the big product depth that we have.

Andrew Beale - *Arete Research Services LLP - Analyst*

Yes. So it's leveraging those existing customer relationships is the sort of the key opportunity and the key reason you can or you think you can maintain your share going forward? And what should be a big growth?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes, but also the licensed spectrum, Andrew, it's sometimes you want licensed spectrum. There are certain applications for which you really want licensed. Look, we support CBRS as well. We're quite open about it. But we do think licensed just creates a significantly better solution.

Also, what we find is a lot of our use cases require assets to move in and out of an environment. So their having access to licensed spectrum, what we call user A, where the user comes in and leaves the premise is also a good one. Also for outdoor coverage, we're able to do that much better.

Andrew Beale - *Arete Research Services LLP - Analyst*

Yes. And licensed spectrum is about guaranteed performance. Essentially, you can guarantee the throughput and connectability of devices in a way that you can't with unlicensed.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes, also SLAs on the wireline network, we give very, very strong SLAs as we migrate -- and we have a whole organization both the culture, the commercial model as well as the operation model to support those SLAs. We just take that and translate in a wireless environment in a private network space. So -- and we have a lot of experience in private networks. We have, I would say, one of the largest WiFi managed operators in the world today. and we've built incredible amounts of large complex WiFi environments with custom SLAs. So there's a lot of institutional depth there that we're going to leverage as we roll out private networks.

Andrew Beale - *Arete Research Services LLP - Analyst*

Nice. can we just talk about the charging model. I mean I guess we sort of envisaged you're dealing with a large area, prices or not per square foot basis? Is there some other basis that you charge?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, square foot is an easy way to do it. So there are 2 elements to it. One is OpEx versus CapEx model. The second 1 is what type of charging methodology we have. What we find is -- earlier, I had the strong thesis that it's all going to be an OpEx model on a per month basis. We'll take the hardware, we'll amortize it. What we are finding is it's 50-50. 50% of customers say, hey, we'll buy the equipment upfront for you guys and then you guys provide the managed services and maintenance and top. The other half say, you know what, give me a single price. I don't care where you buy the equipment from. So it's 50-50 on the split for that.

In terms of how we price, look, I would prefer we get to a per square feet model. High, medium, low, different type of solutions per square feet. We started quoting a lot in that space. At end of the day, it comes down to a number of nodes, amount of fiber we put in and the complexity of the environment. So OpEx, CapEx is the first driver, square footage is definitely an easy way to do this. But like any new business, almost every case tends to be more custom -- my sense is in the next year or so, you're going to start converging into a few solution, an OpEx model, a CapEx model and a per square feet model. I think that's where the model is going to land, but I feel we haven't gotten there soon enough.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. And you presumably got hardware partners, hardware vendor partners, system SI partners, there's cloud integration to be done as well, which is coming on to the sort of MEC question. But in a typical contract, I mean, where is your share of revenue going to end up? Is it material? Is it minority?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Look, it is material. Look, if it's a minority, it's not a business we want to be in. Similar to our core business. Look, in terms of equipment, we've partnered with Ericsson for a very high-end licensed product -- licensed spectrum product, Nokia, which is DAC product, which uses CBRS and Celona, which is, I would say, the low price point, easy to roll out product, if you will. But our value add on top of that is upfront in the solutioning, the RF planning, the design, the implementation and then the managed services stack that go on top. So it's a pretty substantial piece of the overall stack. Look, at the end of the day, if all we are doing is passing through equipment. It's definitely not a value add for us. And it also doesn't pay rent for the licensed spectrum we have. So this is a substantial business for us.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. Good. So let's move across to mobile or multi-access edge compute, MEC. And this seems to me like a business that is taking a little bit longer to develop and monetize but I think probably like other cloud business models has huge potential once it gets traction. And obviously, you've got different flavors of MEC, public MEC, private MEC. You've got partnerships with all cloud players, you've got a deep integration with AWS, which I want to come on to. And we've read about all the potential applications. But perhaps you can talk about the life cycle of this product, where we are at the moment, how it's going to develop over the next few years and when you get to a material ramp in revenues?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Let me start with the end and then kind of work my way back. I think we're going to start -- we have a lot of proof of concepts today. We've got some early deployments of commercial deployments. Where does the revenue become critical for us is going to be back half of '23, early '24. That's when we're going to have revenue at a scale that's going to be exciting for us coming. So we are probably still 18 months away from that piece from happening. What I'm seeing in this space is demand is a little slower than what we had estimated early on.

Now demand is slow, but the interest is not slow. The reason demand is lower is customers are having to rewrite some of their applications to take advantage of the MEC capabilities. So if you're running a large database, what portion does it sit in the core? What portion sits at the edge? How do you get the back and forth on it to get the right price performance ratio. So there's some rewriting of code that needs to happen, and that is happening to take advantage of the edge if you will. The second piece is just knowledge.

Look, we remain really bullish on edge. We think edge is an even bigger opportunity than cloud but it's going to take a while for us to get there. And the other pieces, look, as our networks get better and better, we have to do even better to show the value of the edge. So there's an interesting play for us here as well.

So overall, slower-than-expected demand coming in. Interest is very high, multiple proof of concepts, some early deployments in this space. But I think '23, '24 is when we start seeing significant revenue here.

Andrew Beale - *Arete Research Services LLP - Analyst*

And who's driving applications? Is it the customers themselves who know how to do this? Is it -- there are SI partners who are sort of pushing them? What role do you have in that?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, historically, telcos have not been the most partner-friendly companies in the world to work with. We are good at many things, but working very closely with partners especially on go-to-market has not been our strength. This time it's different. We've changed it. We want to be partner first. I have very little problem if majority of my customers access my MEC through a third party. In fact, I would prefer it that way because -- so as a result, we've gone in -- that's the reason why we've tied up with 3 of the cloud providers.

Today, you can get access to a private MEC, in some cases, public MEC through the cloud partners. In fact, in AWS, you can just go right now, go drop down the Verizon. We have 19 sites where we are deeply integrated with them and get access to that edge immediately to do that. So, one is just -- and every customer may have a different option in terms of which cloud partner they want to go with. So that's why we partnered with all 3.

The second is system integrators. I would like large system integrators to all have a Verizon 5G practice. And we are quite content with owning the 5G, the network layer, the managed services layer on top and then leave the application for the system integrators or the software providers to do that piece. -- we're quite comfortable having that particular structure in place. And the last 1 is application developers. How can we incentivize them early to write applications that make sense. So this will require different people in the ecosystem to come together. But in the end, if majority of my network is used by third parties leveraging it, I'm quite comfortable with that.

Andrew Beale - *Arete Research Services LLP - Analyst*

Perfect. Well, you talked about the 19 ultra low latency zones that you have with AWS, which is -- which seems to be like the deepest integration you have, I mean, you're working with all the public clouds. But in terms of that AWS investment. What do you have to do to get to that rollout? Is it AWS running in the Verizon edge data centers vice versa? What are the benefits of having this sort of tight integration -- and does it make you the logical partner for low latency applications on AWS?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

To get to this, the first thing we've done is AWS operates within our, what we call C-RAN sites. So these are our cloud RAN sites where we consolidate a lot of cloud equipment -- cloud RAN equipment in that space. So when they say there is a physics about life sometimes and when you co-locate both the RAN as well as the compute and storage stack literally in the same building, you're one jumper cable ahead in front of each other and that really helps latency. Look to get that, we had to put unlimited amounts of fiber in place to get to that really low place. Also the amount of spectrum we have deployed in millimeter wave and C-Band to get that space. And the way we work is AWS is responsible for rack deployment with memory optimized, GPU optimized, general purpose EC2-type volumes of space. We take care of the 5G interface, the 5G connectivity allows the overall system integration piece to do that. And it's up and available, it's generally available and more and more developers are using that any given day.

Andrew Beale - *Arete Research Services LLP - Analyst*

And in terms of the integration with the other cloud players, do you have the same level of integration, or does - or are the other clouds partnering with someone else to do the deep integration and then more generally with all players?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

No. Look, with GCP and Azure, we have a private MEC integration. So if you are in a factory environment or a port environment, you can run a local instance of Azure or GCP that's deeply integrated with us because the code is to get the full value of low latency as well as speed and connectivity that the edge applications can use you need to have native integration between those pieces.

So in Google and Microsoft, we have a private MEC integration with AWS, we both have a private and a public met integration as well. And the way I look at it is, every company has their own select partner of cloud and SI. I want to integrate with all of them, so they don't have to make trade-offs. They can just get on their preferred cloud and SI partners, and then we'll integrate with that.

Andrew Beale - *Arete Research Services LLP - Analyst*

Okay. Very clear. And just thinking about this business sort of on a 5- to 10-year view, is there a way of sort of thinking about how material the business could be in the context of your current business revenues?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. TAM is around $30 billion, we think next couple of years. Maybe it's going to take a little longer to get there as we have seen in the last year or so. So this could be a pretty substantial business for us. At this point, I'm not able to exactly predict what portion of our overall business we have. Now partly because our mobility business continues to grow. I mean, it's an $18 billion plus industry growing north of 7%, 8%. So overall share is exactly difficult to do, but we feel very comfortable given the progress we have. But more importantly, the lead we have in this space. We think we have a lead anywhere of 18 to 24 months compared to our peers in this space. So as soon as the market develops and takes off, we'll be the first to capture that demand.

Andrew Beale - *Arete Research Services LLP - Analyst*

And that's going to be end of '23 at the beginning of '24, when you think the first big customer announcements that are sort of not just proof of concept will be coming.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes, similar to where we are with private networks now, think about I have close to 500 to 600 opportunities we are working on in private networks. A good portion of that is already contracted and in different stages of deployment. So I want to get to a similar stage by the end of '23, early '24 for MEC.

Andrew Beale - *Arete Research Services LLP - Analyst*

Perfect. Now I think we're coming towards the end of our time, but I've got my colleague, Alex online, who's been sort of collecting audience questions. So Alex, do you have some of those?

Alex Pound - *Arete Research Services LLP - Analyst*

Yes. I got a few. So we've got 1 on 5G-enabled cars. So a lot of car makers are planning to launch 5G enabled cars from '23, '24 and have services strategies and car-to-cloud capabilities to enable, can you talk about how you're engaging with carmakers like Audi? And how do you think about these partnership business models as 5G and the car scales up?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. The auto is a great space. Look, that's a space of good growth for us. We -- on non-auto IoT, we have majority market share in the U.S. On cars, we have less than majority share. So it's a huge growth market for us. We think of the car as 2, there's a front-of vehicle and a back of vehicle. The front of vehicle controls the operating system of the cars, whether it's EV or autonomous capabilities, the operating system, pulling all the chipsets together. The back of the car so that my kids can watch Netflix and YouTube and not ask me when they're going to get home. So it's 2 different pieces of the stack that we play with there. In the case of Audi, I think starting 2024 models, we'll have 5G pretty deep in the space as we do that.

What we want to be is, we want to be reasonably open to whichever type of underlying chipset infrastructure they use, so that our connectivity can just plug in to do that space. We go and integrate early on with the chipsets but also ensure that the head end of the module makers have the Verizon capabilities and the band support early on, which is why it takes 2 to 3 years lead to get some of this in the car. Right now, most of the auto manufacturers are working on '25, '26 in some cases, '27 models. So how quickly can we get in and get our Verizon specification into the chipset and the head end. There's a lot of work for that to happen.

Alex Pound - *Arete Research Services LLP - Analyst*

Perfect. We've had a few questions coming in on the news this morning, the change of the Verizon Consumer CEO. Obviously, it's been a tough year for Verizon consumer, the postpaid mobile base. So any comment on the change of CEO this morning at the consumer division and maybe a bit on the potential recovery trajectory for consumer for this quarter and into '23?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, it has been a tough year for us on the consumer side. The team is very capable and are focusing on getting the right pieces put together. Look, what we are seeing in 4Q is we'll be 4Q net add positive on the consumer side. Of course, on business, we've had very strong, I think, 5 quarters in a row, we've been market leading in that space. We're going to continue that trajectory. Consumer is going to see it turn around. Look, overall, we liked the nature of our Black Friday week -- we liked the traffic. We like the conversion coming into the space right now. And look Hans is going to take personal interest and spend more time himself in the consumer business.

Alex Pound - *Arete Research Services LLP - Analyst*

Great. And then we've got a little bit on the enterprise mobile market and how you're kind of thinking about pricing in that market with the other carriers looking to take share. I think you obviously mentioned earlier, you've got a very strong position in that market with 45% share. But if they're looking like T-Mobile, et cetera, looking to eat into that, then there's a risk, particularly with macro uncertainty that pricing becomes a bit more aggressive? And how are you kind of thinking about protecting that share from your peers?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. That risk has been there forever. We've had a very strong share position for the last 2 decades in that space. And this question comes up every single year when I do a similar conference like this. I think we have a good moat in that business. It comes down to network that is B2B optimized for us. It comes down to deep integrations that we have. It comes down to distribution. It's very difficult to build the distribution that we have with direct and indirect players. And last is accounts services. So we've passed through 2 price increases this year in the space. In fact, we're going the other way around, we're seeing ARPU accretion. We have 2 reasonably large price increases that have flown through our business this year. And that just shows the strength of the franchise we have in the B2B space.

Alex Pound - *Arete Research Services LLP - Analyst*

Sure. And one last one, we've got on your sort of partnership with AWS. I know you spoke a little bit about it. But just on the sort of how the kind of revenue sharing works when you go to market with AWS on mobile edge compute and who's doing the go-to-market? And yes, how that kind of balances out between the 2 of you?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, on the public MEC or the public mobile edge compute business, Amazon AWS has the go-to-market lead on it. You can go to their website, drop down, they push it through their channel partners as well as their sellers into their accounts, and we get a revenue share out of it. On the private MEC space, it's a joint go to market. We take the lead with the many times they bring in accounts as well. But public MEC, they are primarily in charge, and then we get a revenue share.

On private, it's a combination of both. But what we've done is because we both have such strong position in our respective markets. There's a very high Venn diagram overlap of customers that are big customers of theirs and big customers of us. So that's the space we are focusing right now because they've already made a decision to go with AWS and made a decision to go with Verizon. So those are the customers we want to go quite aggressively with the private network and a private network and a private MEC solution.

Andrew Beale - *Arete Research Services LLP - Analyst*

I think I'm going to have to draw a line at that point. But just thank you very much for a really interesting discussion about all aspects of both the old and the new of the business division and what you're doing and how you're defending. Any last words that you want to say before signing off?

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Yes. Look, we have a very strong franchise in our B2B space, our priorities are quite straight. One is continue to take share in the mobility space. 45% is not the flow for us. We can go higher up in that space. We are not losing share. We are gaining share even in competitive spaces like public sector, we've put on a great show there. Second is fixed wireless access. We want to grow significantly faster than the market. We have a once-in-a-generation opportunity to be a B2B-centric broadband offering. So that's a big growth market. Third is I have to make a market in private networks and MEC, we think a strong incumbent position is going to make us do that. And then lastly is wireline, how do we transform that business as it migrates from a private IP to an SD-WAN environment, how do we take enough cost but then keep investing in OneFiber so that we get the economics, right? So those are our 4 key priorities as we head into 2023.

Andrew Beale - *Arete Research Services LLP - Analyst*

Very clear, very interesting. Thank you very much again, and look forward to continuing in the future.

Sowmyanarayan Sampath - *Verizon Communications Inc. - EVP & CEO of Verizon Business*

Thanks so much, Andrew. Take care.

Andrew Beale - *Arete Research Services LLP - Analyst*

Thank you. Bye.
