Lumen Technologies, Inc. NYSE:LUMN

Company Conference Presentation

Tuesday, August 13, 2024 10:40 PM GMT

Table of Contents

spglobal.com/marketintelligence

Call Participants

EXECUTIVES

Satish Lakshmanan
Executive VP and Chief Product &
Strategy Officer

ANALYSTS

Gregory Bradford Williams
TD Cowen, Research Division

Presentation

Gregory Bradford Williams
TD Cowen, Research Division

Good afternoon. Welcome to our session with Lumen. My name is Greg Williams. I cover the cable, telco wireless and fiber space at TD Cowen. I'm joined in this section -- session by Dr. Satish Lakshmanan, the EVP and Chief Product Officer at Lumen. So Satish, thank you very much for coming.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer
Pleasure to be here. Thank you for having me.

Question and Answer

Gregory Bradford Williams
TD Cowen, Research Division

Before we chat about GenAI, fiber, which is obviously on everybody's mind, and we will definitely tackle it, we just wanted to get a brief introduction to you and your role at Lumen. And yes, where are you spending most of your time?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So it's been about 7 months. It's been a terrific journey. I think timing couldn't be better. I'm sure all of you here agree, but I'm the Head of Product Strategy and Products itself. For me, last couple of months is mostly understanding the team, the culture and trying to integrate myself with the leadership team. Focus areas are really broken into 4 things, right? One is what we call private connectivity fabric. The acceleration of adoption of fiber, specifically to power these third-party data centers, cloud data centers to drive the AI boom has been really exciting. So spending a lot of time there, making sure that we become the de facto AI fabric.

Spending some time on making sure that we have a long-term strategy to monetize services on that underlying infrastructure, spending a lot of time to fulfill our long-term Lumen Digital vision. And finally, simplification. You heard Kate and several in our earnings call, we want to take about $1 billion of cost out through simplification of our products, our network and the rest of our IT architecture over the next couple of years. So those are the 4 areas.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And you joined Lumen you said 7 months ago, I think, from AWS and you're considered an expert in AI.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

I wouldn't go that far.

Gregory Bradford Williams
TD Cowen, Research Division

Well, the media reports suggest that, so what brought you here to Lumen? And where do you see -- what made this an attractive destination for you?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I think it was terrific through the interview process that as talking to Kate and the leadership team and the understanding the culture, I think I felt really at home at Lumen. The opportunity to really transform the company, you've heard us talk about telco to techco. And I think that opportunity, you're seeing the early fruits of that labor right now with the latest set of announcements and wins.

And I felt that as I was looking at the company, the assets were spectacular, right? The national network that we have, the voice assets we have. We have access to about 15% of the telephone numbers, 130 million telephone numbers. And then Black Lotus Labs, the IP that we have, it is an AI-powered algorithm coincidentally that allows us to detect IP-level threats in the network. I felt the assets could be combined to make something bigger.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And what do you mean by telco to techno? Describe that vision and help us with how it's differentiated from your competitors and the telcos that we cover.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So if you think about the way infrastructure has been made consumable through UI instead of APIs, all the cloud providers and AWS started it a long time ago. We're able to allow that infrastructure to be consumed through UIs and APIs. And on-prem infrastructure started to do that through automation tools, but the last mile, the wide-area network never has been able to achieve that true vision of as-a-service delivery of network.

And so when we say telco to techco, we're talking about exactly the transformation, where we can allow the consumption of our network through composable, modular sets of services that can be delivered through a UI or a set of APIs. And therefore, our consumers of our technology and our networking is not traditional networking buyers, but also developers who are writing those applications, who are consuming cloud infrastructure, who are moving -- who are running workloads across multiple clouds. Who are leveraging infrastructure and assets across third-party data centers, managing workloads on-prem and need a fabric that connects all these resources.

Gregory Bradford Williams
TD Cowen, Research Division

Right. It's almost like a subscription-based model then.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

It will be. So it will be a big change to the way we would allow the consumption of our capabilities. In the future, it would be very much cloud-like consumption based, right, based on utilization, based on on-demand consumption with guaranteed SLAs.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. And where are you in this transformation journey? And where do you think the biggest risks are in this journey?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I think we're in the early stages. And we have about a couple of years ahead of us. And I think the biggest risk right now is simply simplification of the tech debt. I would say, going back to my simplification journey, why that is a key priority for me and the company is we should have started around 5 years ago, previous leadership team should have really started that simplification journey: network simplification, product simplification and IT simplification.

Kate talks about it. We have 20 billing systems, different quote systems, 4 different networks. It's an artifact of all the previous acquisitions. I'll tell you about the complexity in the product to give you an example, and this is public in our earnings statements, we have about 12,000-or-so product codes. We think we can simplify by the time this journey is over to 300.

Gregory Bradford Williams
TD Cowen, Research Division

Okay. Does that mean rationalizing products then?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

It is absolutely by rationalizing products. It's about capital -- smart capital investments and where we can see biggest growth.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. And I do now want to talk about the GenAI opportunity. Can you expand on what the opportunity is for Lumen above and beyond what we've just seen in the media reports and your earnings call? Kate spoke of 3 phases. Maybe we'll start with the phase 1 opportunity, which I think is fiber to these new GenAI training data centers. This seems like to be the largest opportunity. We see these numbers are big.

But help us understand, connecting the fiber to the data centers, how big this opportunity can be. How long does it take to build out to one of these data centers in general? Just help us get a feel for that.

Satish Lakshmanan

Executive VP and Chief Product & Strategy Officer

Yes. So if you -- I'm going to start with a little bit of history. I'm going to talk about phase 0, right? We are in phase 1. So phase 0 was the last 5 years where machine learning models were reaching a level of sophistication that they could be really adopted to serve multiple applications. And now we've reached what I call the age of industrialization of AI, where there's sufficient complexity within the models that can be used to be, a, trained with wide corpuses of data and they can do really purposeful things. And so in order for customers to be able to train those models -- and those could be cloud providers, those could be enterprises or be custom models. They could be social media companies, vertical companies across different industries and all of them now need computer infrastructure.

Computer infrastructure needs data centers. Data centers are being built in areas where they have access to power. Everyone's chasing power right now. We're having several conversations earlier. And when you build these data centers in different locations, you need access to fiber.

And so where we are in that journey is we are becoming the de facto fiber provider for all of these locations. This means locations being data center providers, cloud providers, third-party data center providers, GPs-as-service data center providers. Enterprises want to consume that infrastructure. And so to your point, we believe that the incremental opportunity or the total available market for it, again, these are our internal estimates, around $50 billion to $60 billion. It's growing at about 4% to 5% annually over the next couple of years.

And we think the -- based on the nature of the builds, one of the benefits we have is we have a nationwide network. The conduit-based architecture allows us to add capacity to it by just pulling fiber. The announcement, strategic partnership we announced with Corning, which allows us to reserve 10% of their global capacity, gives us now the ability to build in that additional bandwidth into our network. And last but not least, it really depends on our ability to light that infrastructure can vary anywhere from 4 months to 24 to 36 months. It really depends on whether the data center is on an existing route or it's in a route that we need to build.

Gregory Bradford Williams
TD Cowen, Research Division

Right, new greenfield.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes.

Gregory Bradford Williams
TD Cowen, Research Division

And how many years do you think this opportunity, the phase 1 opportunity would be? I mean there's an argument that says there's only so many training data centers you're going to need. And so when that -- that can go away when we move on to phase 2. Or does it have a lot longer legs to it? We're just trying to understand that.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

It's hard to tell. It's unpredictable. But definitely, as I think about the build phase, which it will probably culminate in the next couple of years, 3 to 4 years, it may continue beyond that. I've read some recent reports that maybe as many as 2,000 small, medium data centers that are getting built out. So it could go even beyond that. So we think about 2 to 3 years, and then we'll get into actual utilization of the model across SaaS providers, across ISVs that could be either on-prem hosted, could be within the SaaS provider data center or within a cloud provider data center.

Gregory Bradford Williams
TD Cowen, Research Division

Great. And we'll get to phase 2, I think, in a moment. But before I do, you mentioned Corning. And on their earnings call, not just the idea that they've reserved some inventory for you, but they also mentioned that inside the training data center, hyperscale is going to be 10x more fiber in the data center. And I guess the rationale is all these GPUs need to be connected to each other kind of like a neural network, so there's a lot of fiber going on in there. I'm just trying to understand, is that an opportunity for Lumen. Or are you guys more outside the plant and connectivity as you get going?

Satish Lakshmanan

Executive VP and Chief Product & Strategy Officer

Yes. So our right to win and traditional sweet spot has been network edge. So what we define network edge is the customer premises entry point. However, we do have a lot of enterprise customers and large-scale customers who want us to provide managed local area networks as well. So -- and we do that. That's a pretty significant business for us.

And for us, it really depends on what the customer needs. And so what we're willing to do is managed infrastructure. That's a service we provide through our M&P professional services. We'd be happy to do it.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And then maybe talking about the SaaS providers and their own data centers as they start to use these AI applications, I guess it's like sort of phase 2. Help us with how or even where Lumen participates in the inference compute node opportunity. Where do you think that's going to be? And that doesn't necessarily mean new fiber because that could be an existing data center. Maybe it's augmented or something. So maybe you can help us out with that phase 2.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

So the way we think about it is in phase 1, where we're building out the network, we're also thinking about building it out as a mesh network. And what does that mean? If a workload from a given enterprise needs to gain access to a cloud provider, we wanted to be the connective provider of choice.

A customer wants to do multi-cloud networking, we want to be their provider of choice. A customer wants to go to a third-party data center, those large infrastructure providers, Equinix, DRT, we want to be that connectivity of choice. If a customer wants to move workloads and go to GP-as-a-service providers, we want to be that fabric of choice.

So the way to think about it is the demand for -- during that influencing phase is going to come from either cloud center providers who are wanting to peer with other cloud center providers because most enterprises, large enterprises run multi-cloud workloads. It is going to come from enterprises who are looking for higher bandwidth connectivity to clouds and to SaaS providers whose applications they're using to power their own IT stacks. And so this is -- this will require like a highly meshed fabric, and it breaks the interdependency on wanting to host the infrastructure in any one third-party provider in the middle mile.

Gregory Bradford Williams
TD Cowen, Research Division

Interesting. So it might not be as large in size in these big whopper deals that you see in the press releases, but it probably has the longer tail to it once it's implemented and then the bigger, thicker recurring revenue streams, too. Is that fair to say?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

It is. I think this investment, the 20-year annuity is recurring for us. In addition, our ability to light it with traditional layer 1 to 3 networking services, waves, IP, Ethernet is incremental growth that it provides. And so we're really excited to have the growth potential of this combined business.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. And maybe moving on to what Kate said about phase 3, you can expound on that, basically bringing up the growth when AI talks with AI. This goes above and beyond my sort of expertise. So I'm curious. Help us where that physically resides and what that means and Lumen's opportunity in phase 3.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So I think this is about the vision for an intelligent future, right, where you have smart applications that are powered by AI. They may be using compute infrastructure for inferencing purposes, not necessarily for training purposes, in certain areas of the geographical country where they're using our fabric to really communicate with each other. And so there are different geographical

areas across the U.S., which are really going to be providing the infrastructure for inferencing. And the communication between those rings, so to speak, is what the long-term vision is.

So as you think about that growth opportunity, be the connectivity default fabric for training of the model, be that provider of a meshed fabric when people want to use a distributed application environment regardless of where that application is hosted. And then be that provider when these models and applications are communicating with each other and sharing information and intelligence to improve our productivity.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And that's just augmenting the network for more connectivity. It's probably more like lip services sort of deal?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes, totally. I think you don't want the networking to become the bottleneck. And I think a lot of customers, both in the enterprise and in the cloud, are recognizing that if you're going to invest in GPUs and in core infrastructure that is expensive, you don't want networking to ever become a bottleneck. So rearchitecture of even the wide area network is an important paradigm that is necessary for future success of AI.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And it seems like we just spoke with Unity at our last session. These big hyperscalers to your point, if network's not the bottleneck, we could spend a little more on that just to make sure it's not the choke point, if you will.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Absolutely.

Gregory Bradford Williams
TD Cowen, Research Division

And maybe you can help understand -- help us understand AI and how it's working internally for the company. How is Lumen using AI to become operationally efficient? Because I want to hear that first. But second, what it is, is -- if you have great use cases, that means other enterprises have use cases. We're all trying to figure out the use cases for AI. So maybe if you can give a taste of what you're seeing in...

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I think I would say we are a moderate to advanced user of AI. A, we're using it internally to boost productivity across all the functions. So we are a big user of Copilot. That has really given us measurable and quantifiable productivity gains across sales, across product, across finance, across legal and across engineering.

Gregory Bradford Williams
TD Cowen, Research Division

Can you provide us some examples there? Sales, finance and...

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So think about opportunity identification, think about better targeting, think about your inventory management in operations. These are all things that can be automated with AI. If you think about knowledge and search, finding information that are sitting in disparate silos, that's another thing that AI can power. So these are all productivity gain applications.

In addition to it, I think if you look at Black Lotus Labs, I mentioned this earlier, this is an asset that we've always had in Lumen, which has allowed us to identify IP-level threats in the network as early as 7 days before anyone else has seen it. That portion of the IP was never really monetized, and we're getting to the point, and we have said that in public statements. We're getting to the point we're

trying to leverage that technology to do proactive IP-level filtering within our network. As many of you know, it's a highly peered network. 95% to 98% of all IT traffic is peered through our network, so we have a lot of visibility into our core network. And that gives us the ability to really detect threats early and prevent threats from being -- from proliferating through our network.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. So it's boosting production at Black Lotus Labs. Is there anything to do with the $1 billion cost savings with the AI efficiencies as part of when Chris spoke about the $1 billion transformation.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

They definitely are operational and networking efficiency gains that will come out of AI. But the majority of those cost savings come from the combination, the trifecta that I talked about: product simplification, reducing the number of product codes, network simplification. We have 4 different networks all coming from historical acquisitions, different quoting and billing systems. It's the consolidation of all of that is where -- that drives majority of this cost saving.

Gregory Bradford Williams
TD Cowen, Research Division

Right. So you're playing obviously a pretty large role in the billion-dollar cost transformation here on the simplification.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

I think Dave Ward, our CTO; and then Kye, who's our operations leader, all probably will share the responsibility and the rewards.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And you mentioned a little bit about Black Lotus. So I was hoping to expound on that. I mean security is an adjacency for wireline networks and with AI bad actors, it could even be a greater focus. Maybe you can help us with the security strategy and that value of Black Lotus. Where do you play versus other security providers that play in this space? How do you approach the -- is it part of the RFP process and a larger solution? Just trying to understand where your role is?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So we are definitely seeing network and security conversions. And so if you think about historically what we have been, we've been largely in an MSSP provider. We have taken partnered solutions and then managed security in customers' premises in addition to providing network connectivity.

Go forward, we want to go down a parallel path. One is based on Black Lotus Labs, find monetization opportunities for it. Proactive IP-level threat filtering is one example of it. We'll continue to evaluate other use cases to monetize Black Lotus. The other piece of it is we will continue to partner with the right partners, whether it's SASE, SD-WAN, whether it's integrating firewall, secure gateway for cloud-based security, on-premise security and then wrapping it around with managed services. These are all within our wheelhouse. These are capabilities we do effectively today and will continue to expand.

One of the asks we're getting, both from our public sector customers and our commercial customers, is really to also do security operations center, SOC as a Service and network operations center as a service. So we'll be able to expand that portfolio of managed services as well because it's such an adjacency in the network. Customers want to focus on upper layers of the stack and want to relegate network and security operations to people who have been doing it for a living.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. And maybe describe your competition in this whole Network-as-a-Service and packaging with security. Do you have sort of main competitors on your -- with the NaaS platform and specifically like Internet on demand?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I'm biased. So I'm going to say no one really competes, but I'll put some color to it as to why I say that. I think first, let me describe the vision, right? The reason I believe or we believe our vision is complete is because our Network-as-a-Service is true as a service delivery model of infrastructure. So the idea of building out your infrastructure right now as a part of phase 1 of the AI development, building composable modular services that you can deliver on that underlying infrastructure through our Lumen Digital portal is as close to a cloud-like consumption model as you can imagine.

Now when I think about traditional telcos, most of them are taking a managed services approach to it, which means putting a managed services wrapper. But under the wrapper, other than changing the consumption model, it is still the old way of delivering network connectivity to either an enterprise or to the cloud. So I don't really see them as direct competition because our vision is much closer or almost identical to the cloud delivery model versus the managed services model.

There are traditional digital providers in networking and security that are available, think Cloudflare, PacketFabric, Megaport, et cetera, however, all of them lease the underlying network. They don't own the underlying assets. So we believe the combination gives us the right to win in a much more economic, effective way that gives us broad national scale unlike any other competitor.

Gregory Bradford Williams
TD Cowen, Research Division

But you still do need partnerships. Not everybody owns everything and not every network is ubiquitous. You can't do it alone. So how do we think about the partnerships helping you drive growth and scale?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So partnerships are a complicated definition. So I'm going to classify partners into 2 categories, right? One is technology partnerships and then go-to-market partnerships. And we believe both of those are extremely important for us to scale.

So when I think about technology partnerships, we talked about Corning, right, our supplier of fiber. Our ability to meet this growing AI demand in the intermediate term and in the long term is really predicated on that partnership.

Second is Ciena, our optical switching gear. You may have heard of our ExaSwitch brand, which allows us to do waves on demand. We're building that out. That is based on Ciena technology, but it leverages our IP for which we own commercial and legal rights.

Then when you think about networking gear, right, Cisco, Juniper, are great partners of ours. Security, I talked about Palo Alto, Zscaler, Versa, Fortinet. These are all technology partners because building out our network and building our security requires all these partners to come together.

When I think about cloud, it's an interesting partnership. We are having some conversations with folks earlier today. We sell connectivity to them to power their data centers. At the same time, we've become a channel partner for them because their service is on Lumen Edge. But one of the things about Lumen Edge, 95% of U.S. markets are within 5 millisecond of a Lumen Edge point. And so our ability to extend those cloud services closer to customer prem for unique workloads, virtual desktop as an example, gives us an ability to be a channel for the cloud provider as well. And then lastly, but not least, the GSIs, SIs and VARs, who allow us to expand our reach in the market to customers who are willing to consume our digital services, is also an important part of the partnership.

Gregory Bradford Williams
TD Cowen, Research Division

I'm curious you brought up the edge typology you have. How 95% of the market is within a few milliseconds. And now I think about how maybe your GenAI use case. As the AI expert, do you think of some use cases where we're going to need that a few milliseconds on the edge. Obviously, like autonomous vehicles has always been a big part. Anything that you think that's more in the forefront that you'd be excited about?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

We are exploring several. I can think of edge computer vision as an example, during live sports. That's a perfect example of a use case. We do play an active role in the media and entertainment space. A lot of the live sports, including Super Bowl is streamed through Lumen's Vyvx technology and our edge capabilities. So we definitely see a lot of opportunity for edge, not just in serving specific AI-powered workloads, but also workloads that consume a lot of network bandwidth at the edge, right? Low Earth Orbit satellite is

an example that consume large waves capabilities, all delivered through our edge nodes. These are all incremental opportunities for growth for us.

Gregory Bradford Williams
TD Cowen, Research Division

And when I think about other products, AI aside and even security aside that you already discussed, help us with other products and services that you're most excited about. You mentioned SASE, even SD-WAN, UCaaS. What products will be added to the NaaS platform next? Maybe help us on the road map that you're excited about.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

So I would be remiss if I said I wasn't super excited about our core network services. And the reason I'm saying that, going back, right, to our previous conversation, once the dark fiber and the infrastructure has been built out, we think there's incremental growth opportunity for Lumen in expanding our waves and expanding our Ethernet and expanding our IP business. So I think there is a huge upside. I'm excited about core networking services.

I'm excited about the VPN business because that continues for several customers who want to stick to VPN. But we also have customers who want to migrate away from VPN to maybe IP underlay with a security SASE, SD-WAN overlay. So that's an additional area of excitement where we are seeing that convergence of security and networking, which is a growth opportunity for us.

The last but not least, edge workloads that we just talked about, we could become extensions of cloud providers. There are a lot of services I think available in cloud provider marketplaces that we could run on Lumen Edge and solve a lot of problems above and beyond what we do traditionally.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And maybe in the verticals, Kate mentioned in the earnings call AI inference verticals today are financial services, health care, retail. Are these the same verticals for your broader product and strategy? I mean it seems like it's going to cross tons of verticals, but are these maybe the top few? And maybe can you tie some specific examples how your products and strategy can help each particular vertical?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So I think Kate's spot on. Those verticals are hot verticals for us. I talked about media and entertainment and streaming of live sports events. That's an example of a use case in an industry, in a vertical that allows us incremental opportunity for growth.

It's rarely talked about in most places, but if you think about who are the big users of large language models and AI models today, it's typically the SaaS companies. Think about Salesforce, think about Meta, right, and the Facebook application. Think about any SaaS provider who's an ISV. I classify them as an ISV. Travel, entertainment, e-commerce, retail, these are all industries that I think could benefit from reimagination of the network and could benefit from the services that we can provide to them.

Gregory Bradford Williams
TD Cowen, Research Division

Got it. And just back on the edge, because that was something we talked about years ago. Maybe what's been holding that back? And when do you think that will finally come and ultimately be a huge advantage to Lumen?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

I think historically, it's been -- this is my humble opinion, open to discussion and debate. There hasn't been really a killer application, right? Most of the targeting for those edge applications have been going after IT workloads. And the latency that those workloads need just going all the way to cloud infrastructure is probably more than sufficient. And architects of those applications have navigated their way around networking-made bottleneck.

And so we are taking a slightly different position about how we think about edge. Like if you think most telcos, they're focused on 5G, they focus on IoT, they focus on industrial, they're focused on manufacturing. While those may be interesting applications, it's still too fragmented an ecosystem for it to drive meaningful growth for most customers.

We are taking a different approach. We are starting with knowing whether there's a killer application that can actually benefit from the latency advantage. A virtual desktop is potentially an example of that where the remote desktop environments could benefit from having local compute delivered on a network edge. That they can use desktops to consume the network bandwidth and the compute capability versus trying to directly rely on resources in a cloud provider.

So we're taking a very applications-specific view. So we will see growth for that portion of the market. It may be a little slower than the traditional networking connectivity, but we're taking a really capital allocation -- a careful assessment of where we allocate capital and how we can get return on it.

Gregory Bradford Williams
TD Cowen, Research Division

That's interesting. So if remote desktop's closer to the edge and obviously, the post-pandemic work environment we sort of got now a huge hybridization of where we're located. So you guys would play right into that then.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

We totally would. We're evaluating POCs and customer engagements. And I think we would continue to pursue intelligent applications like that.

Gregory Bradford Williams
TD Cowen, Research Division

And you mentioned excitement about your core network still, whether it's VPN. But you mentioned waves particularly, and that's been a hot topic for a couple of reasons. One is you need more waves for GenAI connectivity.

But you've got a new competitor in Cogent maybe coming in, in the waves business, and they're targeting big numbers, $500 million in a couple of years. And it's only slightly more than [indiscernible] industry. So I'm trying to understand if it's a threat to Lumen. How are you differentiated? And how do you defend share if there's an entrant that could come in and maybe coming on a lower price?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

So philosophically, Greg, I think I've been institutionalized by Amazon. So I'm going to give you the Amazon answer. Which is we are customer obsessed, not competitor obsessed.

Now that being said, what do I mean? I feel fundamentally philosophically is as long as we're innovating on behalf and for our customers, and we are providing them the value, which is our AI-powered fabric, a mesh fabric that can solve multi-cloud workload applications, that can give them ubiquitous on-demand digital connectivity, I think we'll continue to be able to deliver whether it's waves, whether it's IP or whether it's Ethernet, access to that networking capability to our customers. And we'll get rewarded for it.

That being said, specific to your question, I think the market is big enough. Like I'm not worried about any competitor coming in. I think we have market share leadership. We have a ubiquitous network. We have the ability to serve a wide array of customers who are on net, serve customers who are our wholesale customers, AT&T, T-Mobile or all of the big telcos.

We have the ability to serve customers who are on the net, so we would consider off-net. We have ability to serve cloud providers. So I think we have an opportunity to grow the business. Could they win and execute against their design and ambition? Sure, right? But at the end of the day, the pie is large enough that I'm focused more on our growth than a competitor is growing.

Gregory Bradford Williams
TD Cowen, Research Division

And you mentioned ExaSwitch can help augment the waves business, right?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. Think about ExaSwitch as an intrinsic technology that we're building at the metro level that allows us to activate waves on-demand.

Gregory Bradford Williams
TD Cowen, Research Division

Okay. Waves on-demand turning the circuit on and off or even both the...

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. Using our digital platform to activate that switch and allow customers to say, I want 10 gig waves, 100-gig waves.

Gregory Bradford Williams
TD Cowen, Research Division

Okay. Dynamic capacity.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Dynamic capacity and we'll build ExaSwitch into the right metro locations. The way the technology is designed, it's got 80 kilometers radius reach. So think -- put it in the metro at the edge of a data center location, you have significant reach where you can become an on-ramp regardless of where the connection is coming from.

Gregory Bradford Williams
TD Cowen, Research Division

Right. And we talked about the large enterprise segment, and I think the public sector sort of takes care of itself. The next segment that's supposed to grow is mid-market. So I'm just curious, you've built a new platform, a sales portal to better capture this market. What are the products or strategy that you're bringing to this segment for stability there?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. So when we think about our segmentation, we think definitely public sector is growing. And we think there's long-term growth there. BEAD funding gives us an opportunity to continue to pursue growth in the public sector space, including whether it's gov, whether it's SLED, we think we can grow there.

Specific to your question on mid-market. Mid-market really is looking for the simplicity of consumption. This goes back to my old storyline. Today, we want to sell them through bundled solutions: so networking, networking security; networking, security, voice; networking, security and managed services. So we are thinking of pursuing that business through managed service bundles that allows them to consume all those services together without having to manage it themselves.

Long term, the composable modular strategy that we're trying to pursue is actually perfect for that mid-market customer. Enterprises want more bespoke solutions, and we've been -- we have a really successful Managed and Professional services business. And so we're willing to leverage that capability, whether it's delivered through partners or through Lumen resources as a way of giving them networking security and managed services than anything else that they do. We also have a thriving business around infrastructure management, and so we'll continue to do that, customize for the large enterprise.

Gregory Bradford Williams
TD Cowen, Research Division

Great. And my final question is with the fast evolution of Lumen in the past couple of weeks. Where do you see Lumen 5 years from now?

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I think our -- we would love to see a couple of things. We would love to see our leverage down, right, to the levels that Chris has talked about publicly. We'd love to be able to see our network and products simplified to the promise that we have all articulated, either in earnings or I've said today: simple portfolio, 300 product codes, unified network, single quote-to-cash process across tools.

We'd love to be able to see composable modular services, where any customer, any of you in this room, regardless of whether you're a networking guru or not, could provision a networking capacity, provision that and enable you to connect to a cloud, run multi-cloud workloads without you having to call someone or first a [SDN] truck over to you to put a digitally programmable network interface device, NID, on a location.

We'd love to see the fruition of that journey. We think it's differentiated, and we are really excited. And I think it's the beginning of that transformation, and I think we can get it going.

Gregory Bradford Williams
TD Cowen, Research Division

So super simplification. An idiot like me can kind of build a network kind of thing.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer

Yes. I mean our intent, as I said, like we've historically appealed to those networking buyers. If I can appeal to those developers who just build applications, don't worry about infrastructure and don't worry about how they're accessing resources and we'll do that intelligent data movement for them across our fabric, like that's success.

Gregory Bradford Williams
TD Cowen, Research Division

Great. Well, thanks, Satish, for joining us. You've been helpful.

Satish Lakshmanan
Executive VP and Chief Product & Strategy Officer
Yes. Nice. Thank you for having me.