Will Townsend: Hi, I'm Will Townsend, the vice president and principal analyst for networking and security at Moor Insights & Strategy. Joining me today is Mike Fitz. He's the vice president of solution sales for T-Mobile for Business. Mike, welcome to our conversation.

Mike Fitz: Hey, thank you, Will. Great to be here.

Will Townsend: Well, we're going to talk about mobile edge computing, and I think to get started, let's define what the Connected Edge is and how it's intelligent from T-Mobile's perspective.

Mike Fitz: Yeah, hey, thank you, Will. And to define Connected Edge or sometimes what we call the Connected Intelligent Edge, let's start with something maybe more fundamental. I think let's first agree that the point of all this network and compute technology that we're going to discuss today is really to connect users to applications, right? I mean, at the end of the day, that's sort of what CIOs are doing. And so by the way, I'm going to define users here pretty loosely. It's people, whether it's us, our customers, employees, it's machines, it's anything that consumes an application. So with that point in mind, let's bear that in mind throughout this. Let's sort of break down what is Connected Intelligent Edge. And let's look at it a word at a time because I think each word actually carries some important meaning here. And maybe we start with edge itself. So what is the edge?

Edge here is usually a concept we think of as a network concept. But to me, the edge really defines the scope or the reach of these applications that we use and that edge is ever expanding. I was running applications probably like you will here on the edge of a network. In my case, the Sprint corporate network. I've been in the same office 28 years. So I was running applications on the edge 28 years ago. It just so happened the edge of the network back then was this ethernet jack over here. But the explosion of mobile devices and the proliferation of better connectivity now allows us to run applications in places, devices, et cetera that just simply wasn't possible. 28 years ago, we couldn't check our work email at home, and we certainly weren't running applications on our phones. That's for sure. Right?

Will Townsend: Yeah.

Mike Fitz: So the edge is expanding.

Next, let's talk about connected in this phrase. I think we know what connectivity means, but let's not lose sight of just how much improved connectivity has really pushed new applications to this broader edge I just described. Remember, it was really just 10 years ago that the advent of 4G created a whole new set of applications like Uber and Google Maps and lots of consumer apps like dating apps and you name it. And now today, 5G's sort of doing it again. There's a whole nother tranche of apps coming out, whether it's... And it's mostly highly reliable low latency apps that are enabled by 5G like AR and VR and robotics and remote learning and remote surgery. Things that didn't work on 4G but are now coming to life with 5G. So I think we know those use cases, but at the end of the day, better connectivity enables more users to consume more applications on more devices and more places.

That's sort of how we all think about it. And have we seen the extent of this connected edge yet? I don't know, but I always like to say if a device can be powered, it likely provides us even more value if it can be a powered can connected device. So I think it's reasonable to expect this connected edge continues to expand.

And then lastly, intelligent. What's the intelligent component of this Connected Intelligent Edge? I would say building on this application enablement theme, intelligent to me means putting more capable or more robust applications in the hands of us users. And in turn, more capable apps oftentimes means more compute. So intelligent here I think means putting more compute at the edge of the network and making it more reliable, more faster, more efficient. As an aside, for those of us who've been around this industry a long time, right? Historians of compute, we sort of know the history, how it played out. It all started with mainframes back in the day where compute was ironically in the cloud. We access those applications with thin clients. So thin, in fact, we actually called them dumb terminals. Will, you probably remember that.

Will Townsend: Oh, I do.

Mike Fitz: We moved to client server architectures and then we lived through the PC explosion. All that moved cloud mainframes closer to us. And now more recently, modern cloud compute has sort of swung that pendulum back a bit. And so moving apps away from us. So to me, edge compute is really the heart of this intelligent compute or intelligent edge idea because edge compute helps us sort of strike the right balance of high performance local compute with the scale and efficiency of pure cloud compute. So putting it all together, that's how I define and think of this Connected Intelligent Edge.

Will Townsend: All right, Mike, so we were talking about connectivity and mobile edge computing being critical elements in this whole Connected Intelligent Edge. Is one necessarily more important than the other?

Mike Fitz: Not necessarily. Both are important actually. And in fact, I would throw out this idea. When it comes to high performance end user application consumption, connectivity and edge compute are really just two sides of the same coin. Think about it this way. If you had infinitely fast connectivity to your data centers or cloud services, there would actually never be a need for edge compute, right?

Will Townsend: Sure.

Mike Fitz: Likewise, if you had 100% of all content and applications being served by hyper local edge compute connectivity, frankly wouldn't be that important. Now, we don't have either of these extremes of course. That said, good connectivity can actually go a long way to avoid the need for edge compute. And conversely, robust edge compute can make up for less than ideal connectivity in many situations. At T-Mobile, by the way, and we take great pride in our connectedness of our network and the short hops to content, the dense connectivity to cloud service providers, et cetera.

And all this does help lessen the need for edge compute when you have good network. However, edge compute is always going to be necessary for certain applications because we have natural hardware limitations, practical network limitations. And unfortunately, good old physics just gets in the way sometimes too of my infinitely fast network. I always think about this little anecdote. If we ran a fiber optic cable with no repeaters halfway around the world, which of course we know, Will, that doesn't exist yet. But if we did that and we put zero latency switches, routers, and servers on both ends. Just based on the speed of light alone, it would take our data 130 milliseconds to travel halfway around the world and back. And that's just way too slow for many applications in our globally connected world. So both connectivity and edge compute will be around. It would be critical to work together for a long time.

Will Townsend: Yeah, no, I totally agree. And I know you're partnered with AWS and I'm curious how you sort of define that collaboration. I mean, certainly Amazon Web Services, they're very focused on telecom. They have a private 5G right platform that they're taking to market. So we'd just love to get some color from you on how you're collaborating with AWS.

Mike Fitz: Yeah. The collaboration between organizations like us and the hyperscalers and providers like AWS are simply a product of the ever-increasing connected digital world. And I would say when we think about this connected edge, let's think about connected in another way. We have to be very, very connected to these partners of ours like AWS, and we have to work together as one team, frankly.

Will Townsend: Sure.

Mike Fitz: We have to connect our systems, our platforms, our SLAs, our support. A close partnership where we deeply understand the interaction of each other's services is just so critical to delivering a successful customer experience. And in many ways in these partnerships, yes, we have some shared responsibilities, but we also have obviously very distinct responsibilities as well. At T-Mobile, of course, our primary responsibility and our commitment to our customers is to provide a very reliable, fast, and efficient network that's going to enable those apps. For partners like AWS or any cloud service provider, they bring the expertise in providing very scalable, reliable, efficient cloud services, including edge compute capabilities that we just talked about a minute ago.

T-Mobile will never be the cloud computer edge compute expert that's say AWS is, right?

Will Townsend: Right.

Mike Fitz: But frankly, AWS will never be a connectivity expert T-Mobile. So while our technology domain and responsibilities are somewhat distinct, again, it is just an absolute must that we understand each other's capabilities, even exploit our synergies, and ensure that these services work together seamlessly and efficiently to delight our customers. And frankly, when we do this, it's one less thing our joint customers have to worry about. We're doing this for them. We're making sure we interoperate, and that kind of partnership provides pretty incredible value for our customers.

Will Townsend: Yeah, no, I agree. And what I like about T-Mobile's approach is that you're not just simply edifying your network to do that like some of your competitors are. You're focused on very discreet use cases. A lot of that gets birthed out of your innovation centers. And I've had time with the team in Bellevue and other parts of the country to see this firsthand. And so I give you kudos there. But to sort of continue on with this conversation around partnerships, I imagine ecosystems are a very important focus for T-Mobile. And I know I've spent time with the team. I understand your strategy with your advanced network solutions, how you're going vertical, and how you're building blueprints with ecosystem partners around that. So I was wondering if you could spend some time sort of talking about that in T-Mobile's approach.

Mike Fitz: Yeah, look, the ecosystem is critical and partners are critical for us. And the reason for that is pretty simple. In today's very complex world, no one solution provider can do it. Right? The needs of our customers are also very diverse and rapidly evolving that this technology landscape that you and I love is so complex and broad. It takes a village sometimes to get things done. And so to bring value to our customers, we have to create more value. And I think we actually create more value with our customers through way I think about it is breadth of partnerships versus a siloed depth of capability. We like to do both, and we like to be very capable and go deep in what we do. But I think the breadth of partnerships we can create is the key. Because as we progress further into this complex world of 5G and AI and IOT and everything else we do, we have to leverage our partner's strengths and expertise.

Doing so helps us innovate, deliver, and so forth. And look, I think about it this way sometimes, Will. Just think of the most basic example. I just talked about this with my team the other day. Think about a very simple application deployment. If you deploy an application, you're going to have a device involved, maybe a mobile device sitting on a network, some kind of security overlay, possibly edge compute, a cloud service, and then the application itself. Right there, just in that simple example, I just named six discreet capabilities that arguably come from six different providers certain. And so what creates more value for our customer? If we try to string all that together ourselves or instead do we build a partnership with six best in breed partners and ensure we have tight integration, cohesive customer service, and then ultimately flawless execution. So even when one partner takes the lead, which is often the case, the partnership is just so critical for us to succeed.

Will Townsend: Yeah. And it's just leveraging core competencies and staying very focused on what you're good at. I mean, I spent 30 years in corporate America before I became an analyst, and I've seen so many companies just stretch themselves too thin, and they're a mile wide and an inch deep. And at the end of the day, that doesn't deliver real value for business customers from my perspective. But well, as we close our conversation, I really want to sort of talk about how the Connected Intelligent Edge can really solve real business issues and drive outcomes. But it's a difficult journey for a lot of customers, and sometimes it's tough to even figure out where to begin. So as we close our discussion, I'd love to get your input on what advice would you give customers as they embark on this journey?

Mike Fitz: Yeah. It's a crazy, fast evolving world we live in as a said a minute ago, right? And it's completely natural. Sometimes you and I look at this space and we're like, wow, what's up? What's next? And what should we be leaning into? And I think our customers oftentimes say the same thing.

And where do I go first here? What's my next step? And my advice to customers just based on my experience in working with them is pretty straightforward.

I would say first start with what you know. Your business requirements, your customer needs, your operational challenges, start there. And then clearly define and quantify what are those business outcomes you're looking for in addressing these challenges. And then third and finally, and this is last for an important reason, look for the technology solutions that deliver on those outcomes. And while this may sound very straightforward and maybe even obvious, I can't tell you how many times we get inquiries where somebody says, hey, I need some private network, or I need edge compute. I need a wire replacement solution, where the customer comes in saying they need a technology solution, but haven't really even determined what success looks like yet.

A recent one is customer wants to replace wifi at a manufacturing plant with a private 5G network to improve their productivity, presumably. And I say, great, what benefit do you expect or need here? And can we measure those cost savings? Is it cost savings? Is it increased revenue or whatever value you're trying to create? Because otherwise, this becomes a somewhat time-consuming network migration and a potential incremental spend. And if you don't understand the outcomes and can't quantify them, it becomes almost impossible to justify these projects. And so, I would just say to the last part of the question, maybe thinking about just one more aspect of this, what comes first? Does technology drive use cases? Does use cases drive technology? Well, as I said, I mean, it's a little bit of a chicken and egg problem, but you can gather from my answer that I believe the business problem needs to come first and you solve it with technology. But hey, sometimes in business technology innovation drives new business opportunities. I mean, what 4G did for Uber, for example, but-

Will Townsend: Yeah, it's a great example.

Mike Fitz: Yeah, no, exactly. So I don't know, for me the key is stay nimble to customers. Keep an eye on the technology that's advancements that are happening, but focus on your unique use cases. Because no partner, no vendor's going to understand your business like you do.

Will Townsend: Sure.

Mike Fitz: But I'll tell you what we can do and what you should always do with your partners and vendors like T-Mobile, leverage us to educate you. I tell you, I see best practices all the time in the industry, likely from customer's peer set, and I think we can be a great resource on what those best practices are in the kinds of business problems that are being solved and how technology, what we're offering, can help solve those business problems.

Will Townsend: I know. It's sage advice and 5G has been that shiny object that lots of folks have focused on. But I think you nailed it. It's about driving the right business outcome and 5G can play a big role there. Certainly.

Mike Fitz: Yeah.

Will Townsend: But hey Mike, thanks for the time. It's been a very enlightening conversation and I'm sure our viewers have found it as equally enlightening.

Mike Fitz: All right, thank you, Will, very much.