Verizon
Sanyogita UTS Podcast
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(Music)

>> Welcome back to Up To Speed, a Verizon podcast. For today's episode Katie Regner sat down with Sanyogita Shamsunder, Vice President of 5G Ecosystems and Innovation at Verizon. They discuss what makes 5G real 5G, how her team is working with innovative partners to bring real-world applications of 5G to life, and the influence her academic background has had on her approach to solving some of today's biggest challenges.

>> KATIE REGNER: Before sitting down with this podcast, I wasn't very familiar with Sanyogita. In speaking with her, I learned that she was born and raised in India in a large extended family, many of whom were doctors. As she got into middle school and high school math became her favorite subject. That led to an undergraduate degree in electronics and telecommunication, an MBA, and then a Ph.D. in electrical engineering. We talked about her extended time in academia influences the way she approaches challenges.

>> SANYOGITA SHAMSUNDER: I truly enjoyed the time during my Ph.D. Because what I think a Ph.D. does is essentially help you frame problems and figure out a systematic way to solve problems. It's a little different than engineering, versus maybe the hard sciences where you're doing a lot of lab work. In this case it's more problem solving and figuring out solutions to problems. That's how I look at in terms of hey, it's given me a framework to think of problems in a global way. So I've been with Verizon for about 10 years, 12 years, and I have like four different roles, different types of challenges and problems to solve.

>> KATIE REGNER: In her current role leading the 5G ecosystems and innovation team at Verizon, Sanyogita works to identify partners and establish work spaces where the company and these partners can come together to ideate and use cases for the next generation of technology.

>> SANYOGITA SHAMSUNDER: My team was formed to essentially work with partners and make them understand and provide a conduit to test the solutions, and maybe even work with them to fine tune and architect them for the 5G network and the 5G capabilities.

>> KATIE REGNER: So Sanyogita, talk to us about Verizon'ss 5G labs, where they are, what they're doing, and how they're working with partners to bring 5G to life.

>> SANYOGITA SHAMSUNDER: There was a need to look at these capabilities and see how we can harness those capabilities to solve problems and build new types of services for our customers, whether it be enterprise or consumer. Last year, when we launched 5G to the home, it was in four cities: Indy, Houston, Sacramento, and L.A. But we wanted to make sure we reach out to innovators and builders in other parts of the country where they are, for example in the Bay Area, San Francisco Bay Area, New York, Boston, and D.C. There's a lot of activity in terms of entrepreneurship and start-up culture that we wanted to make sure as we build out the network that we educate them and bring them in to these locations. So that's why we built labs in New York City, the Chelsea lab. New York is a new tech hub. A lot of applications of tech. Not justify finance, fashion, marketing, advertising, journalism. So all those areas are great for that particular location.

Then we have Cambridge, Massachusetts; D.C., which is specialized to a lot of stuff for the first responders, for public safety that we address. L.A. is a great media hub. There is a lot of immersive content that we can use our 5G tools to create. We have our Riot and VDMS labs in L.A., as well, and they create new types of content. We're able to work with them in L.A. And then San Francisco, the Bay Area, Palo Alto to be more precise. You have to be in the valley for anything high tech that you're doing. Those are the five locations we have today.

>> KATIE REGNER: Then our conversation turned to the art of the possible, and the ability of 5G to help innovators create experiences at scale that aren't possible today. There was a lot of discussion about the myriad of things 5G can do. But what are some specific examples?

>> SANYOGITA SHAMSUNDER: Let's take A.R. glasses today, right? A.R. as a technology can enable a lot of different industries. One of the reasons why it is somewhat limited is because of the capabilities of the devices and capabilities of the networks that connect. The bandwidths are not high enough to support that at scale. Today A.R. is limited in terms of what it can do. It's a more, not a real experience. You have little stickers like the Pokemon Go type of applications. But imagine you go into a store and you're able to look up information about a certain product by pointing your smartphone to a product, getting all the information, and finding everything else that may be related to that based on your preferences and things like that. You may be able to do all of that or at least some of that initially, right? But the more important thing is what we can do in terms of enterprise, not only solve some of their problems that they have today and they're able to do in a limited way, but not at scale. But also build out new types of experiences. Let's say A.R. you could use it for first responders when they are out there in the field and need immediate help in figuring out how they might be able to treat a patient remotely. Right? A doctor who is remote and to a first responder in the field. You can think about applications like that, that are not directly consumer, but they are more enterprise type of specialized services.

>> KATIE REGNER: With all of the possibilities of what 5G can bring, inevitably the race is onto be the first to build out a next-gen network. Verizon has been vocal about the need for the industry to be clear with consumers about what 5G is and what it isn't, including in a piece in by Chief Technology Officer Kyle Malady published in major newspapers nationwide. For example, one company has resorted to putting 5G E icons on their phones, but here is the thing, these phones are still operating on a 4G network, which has drawn wide criticism as a result. Sanyogita and I discussed the credibility issue it creates for the entire industry when we're not speaking the same language and what assets are really needed to call a technology 5G.

>> SANYOGITA SHAMSUNDER: We don't want the consumer to get turned off by something, thinking that they're expecting something different and it's more of the same. Right? That definitely is a problem. So we're working with the industry, with the broader industry, not just the, you know, just our statements. But we're working with the technology providers in the industry to make statements that the real 5G is essentially what we are building. And as we go through the next set of cities, as we build out, we're going to talk about it more. We're going to have experiences in those cities for people to come in to stores and experience what real 5G is.

>> KATIE REGNER: Talk to us a little bit about how Verizon is going about building out that 5G network.

>> SANYOGITA SHAMSUNDER: Right. So we have the assets with the fiber that we have, the deep fiber network that we are building. No wireless network is complete without having fiber. And we are committing to building that fiber and we are building the fiber. The densification that is needed, you know, we are adding cell sites. We have 4G cell sites, densification in many of the cities, and we are adding 5G capabilities to that. More importantly we have a the right spectrum to build this network, which is a millimeter wave spectrum, which gives us over 800 gigahertz of bandwidth, and that essentially means several gigahertz per second of throughput. And that's not possible at the lower frequency, at sub 6 gigahertz frequencies. It's impossible below 2 gigahertz, but that's where our assets lie in terms of the millimeter wave bandwidth, the fiber, and the engineering talent to build the network.

>> KATIE REGNER: We also discussed Sanyogita's role in shaping and influencing next-gen tech and beyond that the people who 10 or 15 years down the line may be the ones building it. She has a passion for guiding other innovators in building technology that will change the world.

>> SANYOGITA SHAMSUNDER: I think what is most exciting is there are so many problems we can solve with technology and connectivity.

>> KATIE REGNER: Going back to that Ph.D. background, the problem solving.

(Chuckling)

>> SANYOGITA SHAMSUNDER: Yeah. And the best startup they say is one that solves a problem that you have encountered. If anybody is wanting to do a startup, you need to find a problem that you want to solve. And I'm sure if you face that problem, somebody else is having the same problem. So I'm excited about meeting these innovators who have deep subject matter expertise in the industry and see the problems that they have today with limited tech, limited connectivity, and more stuff especially on the medical side and the medical industry. There is a lot of opportunity in terms of how we can make the operations easy in many of these industries.
And that's what excites me that there are people out there that are trying to build solutions for that, and then we can help them build better solutions that are scalable and hopefully a win-win for all of us.

>> KATIE REGNER: We also talked about the gender divide throughout the tech industry that's on display at large events like CES, her approach to helping close the gap, and getting all kids thinking about STEM careers.

>> SANYOGITA SHAMSUNDER: I think we all are responsible to making it better. Especially, I think as we have presence at these location, like companies like us, or especially large companies. I think it's our responsibility to make sure we don't fall into the same trap of representing the right set of people, you know, with the right, not misrepresenting women at these locations. So I think we do that very well from our side.
But I think the entire industry can do that better. Obviously there is always room for improvement.

The other thing in terms of improving the input to the whole thing, I think that's something that I'm passionate about. And I have two girls. So I've seen that I think by middle school people start forming opinions.
Kids start forming opinions by what they want to do. By the time you get to high school, it's a little too late to influence them. I think middle school is a better time to do that. I tried my best to talk to girls and boys in my community and in the schools around us. And I started a Girl who is Code Club in Basking Ridge. One thing I passionately disagree with is the media, how the media portrays engineers. I believe there's room for lots of different people. It's a very diverse field. My mantra is it's not a cookie-cutter type of role that you see in the media on a daily basis. Even for men, and for women, engineering is a broad set of capabilities. All you need is a passion to do something new, solve problems, and be creative.

>> KATIE REGNER: As you're talking to young girls and boys as they're thinking about forming their own career choices, what advice do you have for them?

>> SANYOGITA SHAMSUNDER: I encourage them to explore different careers and shadow people. Come shadow me. I'm happy to have you hang out in our company

for a day to see what other people do. Get exposed to different things. Today there shouldn't be any excuse for not figuring out what a career looks like. We have so much technology. It's easy to find things online. And get exposed to a lot more before, you know, making a decision on what you want to do.

>> KATIE REGNER: As we wrapped up our time together, I asked Sanyogita about the personal and professional goals she has in sight for 2019.

>> SANYOGITA SHAMSUNDER: One thing I'm thinking more about is being more mindful. We have a lot of distractions in life, especially with tech. And I think we are in this industry, and I think maybe at a point some of the stuff is kind of going, maybe we can step back and not be tied to our smartphones all the time. I'm trying to practice that more and more often. And then a fun thing, we are hiking down the Grand Canyon later this year, so I'm trying to train that so I can hike back up in one piece. (Chuckling)

>> KATIE REGNER: Sanyogita, thanks so much for joining us today. We appreciate your time filling us in on what's going on with 5G.

>> SANYOGITA SHAMSUNDER: Thank you.

>> Thanks for listening. You can follow us on Instagram and Twitter at VZuptospeed or find us on Facebook at Verizon Up To Speed, and stay tuned for more conversations about technology today.