

Cybersecurity 313 Podcast Episode No.10 with Sarah Tennant

Tamara Shoemaker 00:06

So hello, this is Tamara Shoemaker, the director for the Center for Cybersecurity Intelligence Studies at the University of Detroit Mercy. And I am pleased to introduce Sarah Tennant with the Michigan Economic Development Corps (MEDC). Sarah, please give us a little background before we get started.

Sarah Tennant 00:21

Okay. Well, thank you for having me here Tamara. I am a sector development director in cyber initiatives with the Michigan Economic Development Corporation, and we are the economic development arm of the state agency. So our focus is on economic development within the state of Michigan. I've been with the MEDC for about three years now, and really been focused over the last three years, and building a robust cyber ecosystem within the state of Michigan. I spent three years in economic development, but spent over 10 years in workforce development. So I came from workforce development, and now have crossed over into economic development. And as I crossed over, I immediately recognized that you really can't do one without the other. You can't do economic development with workforce development. And you can't do a workforce development without companies that are going to be hiring the folks. So, I really have spent the last three years focusing on economic development and building that cyber ecosystem within the state.

Tamara Shoemaker 01:17

Wonderful, Sarah, this great, we're really privileged to be talking to you about these topics. So Sarah, at MEDC, where do they fall? I mean, obviously, because you have the actual remit of cyber initiatives. Obviously, they think that cyber is important, but how do you see that as far as economic development for the state of Michigan.

Sarah Tennant 01:35

So the way that our agency works is really we're committed to enabling long term economic growth for all Michiganders. So that's really our charge. Our mission is to achieve long term economic prosperity for Michigan by investing in communities, enabling the growth of good jobs and promoting Michigan's strong image worldwide. So we have a lot of things that we're doing, and cyber really folds into all of those pillars within our mission. So we also have some guiding principles within the MEDC. So in the last year, we have developed a five year strategic plan for the state, for economic development. And some of our guiding principles are sustainable long term growth, regional impact, equitable, high wage growth, and then a customer focus. And I think really cybersecurity meets all of those industries and it meets all of those guiding principles. So, things like regional impact, bringing cyber programs not just to Southeast Michigan, but to all of the state. It's extremely important. And then looking at equitable high wage growth, not just high wage growth, but equitable... looking at the diversity and inclusion and what it means to cybersecurity. And that's been a real primary focus for me as well. So, those are some of the missions for the MEDC, but we really do recognize the importance of cybersecurity. And it's increasingly important for our businesses, our future

economy, not the least of which is developing a robust cyber talent, which is what we're going to be talking about a little bit about today. Michigan needs to work to develop and support programs, dedicated to grooming our future cyber leaders. And we're really looking to develop a workforce that's nimble... So if there's a downturn in automotive or an upturn in defense, we really need a workforce that can cross cut across all of those industries. And what's beautiful about cyber and the focus on cyber is that cyber is an industry that covers all industries. It's not just automotive. It's not just I.T., it's not just aerospace, it's every industry. It's really tech in general. So there is really that need. So that's really, they saw that need. Our leadership, our state leadership has seen that need not just with our current leadership, but the leadership previous. Both Governor Snyder and Governor Whitmer have been very focused on cyber and building up that ecosystem within the state.

Tamara Shoemaker 03:57

So what I heard you say, it's not just... I've heard this in different spaces about Michigan that were sort of a cyber leader in a lot of areas. And so we want to sort of in and we know that there's a huge demand for that, and so that we're sort of going towards that cheese, right. I don't think it's not just about that. It's also when you when you're faced with economic development for all of the industries in Michigan, cybersecurity is a huge component of that, or the lack of the talent that we need for that pipeline, right. And so all of our industries are dependent on this. And so it's not just the fact that a career in cybersecurity is a lucrative career and long lasting, has a ton of benefits to it, working, distantly like we're both doing, and great pay and all that kind of stuff. But it's also key to the infrastructure in the state of Michigan. And so our leadership is known that it sort of been and that's I think, why we've gotten the moniker about being a little bit leader for the Midwest that way, why we've made the kind of progress that we've made. And you and I met, kind of when you started taking over this area, and I've sort of followed along with some of the stuff that's been going on in MEDC and it's been it's been a great working relationship, and but you guys get it, right. It's not just about oh, we're gonna we're pump full of cybersecurity people so that we have a bunch of new jobs for those cyber security people. But really, it's both. It's we need all of those new jobs, because the huge openings that we have in that and but we also need to protect our own infrastructure, and our own industries and those kinds of things.

Sarah Tennant 05:27

Absolutely! And so for example, 96 of the top 100 automotive suppliers in North America are here. We have the most engineers, we pump out engineers at a greater rate than any other state in the country. We have a huge defense footprint, so we need to look at all of these industries, and we need to not just look at these industries siloed we need to infuse cyber into all of these industries. So if you are a student that is thinking, you know, their perception of the auto industry, it can be completely different than what that industry really is. It's actually a tech industry at this point. So if you're going into cyber security, when you look at the makeup of a car, it's more connected than some computers. So what you're so what you're looking at is kind of changing that mindset within the state as well. So really having those deeper dive conversations so that people can understand that cybersecurity is not just about the computer itself. It's about all of those other things that are being connected to the infrastructure and

learning that really, ultimately, Tamara we need everyone to be thinking of cybersecurity. So whether you're a student that's going to be a plumber or they're going to be an electrician or they're going to be anything really anything, any job now is going to have a cybersecurity component, or there's going to be a department that needs to think about that. And because they are connecting through the internet for work, so many jobs are done remotely, we need to start them thinking about cyber hygiene as early as kindergarten, so they need to start thinking about password protection. And what does that mean? So we don't need everyone to be a cyber expert. I mean, we really do need everyone to be a cyber expert. But that's probably not realistic. But what we do need is for them to have some cyber awareness so that as they move through these industries, that's a component—it's a soft skill almost that they will already have in place. And, we really are looking at it from this holistic view within Michigan. So we have a lot of top down so leadership is pushing it down. But we also have a lot of grassroots efforts where people see the importance within their community or their school or their business and are pushing that up through that as well. So really, we're trying to be that connector in that space to make sure that industry and schools are talking and that the state agencies and industry are talking and everyone's kind of collaborating together because we aren't going to solve this one one state agency at a time

Tamara Shoemaker 07:49

Sing it sister, you are talking equally what I want to hear. This is exactly what I say all of the time. This really is a cultur shift. We have been given the innovations and I watched as my grandchildren, from tiny toddlers swiping iPhones to play interactive games. I had a plumber in today, to fix my plumbing, who used a GPS, who has my address on that GPS, who knows where I live now and all that kind of good stuff. And if his stuff is leaked out, my personal information is now out there. And so you're right it I mean, it hits every, every aspect of our lives, and we truly need to start working on it much sooner and bake it all in. I talk about this, as I say over and over again. But it's kind of like seat belts, right? So at first, we didn't think that was anything but an encumbrance to our freedom in our, in our cars. You know, I couldn't reach the stereo or this or that, or whatever, you know, while I was driving. And now we know it saves lives. And but it was a huge cultural change, and it happened. And I'm hoping you're hoping, you know, the world is hoping that we all, you know, get this into ingrained into us. And so it's really wonderful and heartwarming to know that at the top levels of government in our state are doing what they're doing. And they have all these agencies working on the problem. And that, like you said, we have so many innovators out there that are doing all kinds of amazing things. And so I'm excited about the work that's happening there as well. I talked to my cyberpatriot kids at Camp all the time and say, you guys are going to be the innovators. You know, you guys are the ones who are going to bring us all the cool new stuff. I want you to be thinking about this when you're doing right. Think about it later that Did something like for instance, do you remember when they first came out with those little bears and little stuffed animals that had little video cams in them so you could watch your kids? Never thought about the fact that there might be stranger danger involved with the internet and that other people would be able to tap into that thing. It sounded like such a cool thing it's an intrusive kind of a thing in the room, people didn't have to know it was there, and make sure that your caregivers and you know you're you could keep an eye on your kids and all that stuff. Turns out it was a huge problem. I don't want that to

continue to happen it because it does. Right now my refrigerators got a mind of its own. And besides telling me to stay out of the ice cream at night. I don't want just everybody to be able to kind of come into my home, right and observe. And so these are solely just

Sarah Tennant 10:01

Absolutely, just because we can connect things doesn't always mean we need to connect things but we also don't want to be scared of technologies. Right? So Michigan is a leader in global mobility. So we are turning this automotive industry into a mobility industry. Well, that mobility industry means that all of these cars are connected, the infrastructure connected. Well, that that also presents an opportunity for the bad guys to come in and wreak havoc. Well, it's still a good plan—mobility is great, but we just need to make sure, as we're developing these processes, that we're also thinking about the security ramifications. So if we're looking to get to zero deaths, like seat belts, and I mean, that's the plan. Right? We need to make sure that our engineers who are developing these capabilities are actually thinking about baking those cybersecurity components in from the beginning. So really it's a lot of conversations that needs to happen. They need to understand as they're building the bears or they're building these really convenient things for our homes, that there is a vulnerability there. There's an inherent vulnerability to anything that's connected to the internet, but it's doesn't mean we can't have these cool things. It just needs means we need to start thinking about these things as we're developing those, those, whatever it is the widgets, the, you know, the connected the connected floorspace within our factories, we need to think about that cyber security. And part of what we do is that awareness... is having those conversations, making sure that we're bringing the people together that have those valuable conversations so that they understand what this means, and quite frankly, our kids are going to be experts at it at this point. I mean, they're all at home learning, through zoom and through virtual learning now. And so we need to start having that conversation early and often about what does that mean. We don't want people to be scared. I want to I want to connect a device in my house. I find it very convenient. But I also want people to understand that all of those devices, they might not want what I have, the bad guys. But they might want my contacts. That's where we have to start having those broader conversations. And that's been one of the missions that we've been really looking at is, how do we have those broader conversations. And for us as the MEDC, I've really been charged with working with all the other state agencies. So we've been working together with the Department of Technology, management and budget. We've worked with the Department of Education and Labor and Economic Opportunity with the state police, with the National Guard, how do we take each of our programs and integrate them together? And so from my perspective, on the economic development side, building, the cyber ecosystem has a great benefit to the state. So we have the ability then to have all these assets. So as we're bringing companies here that might be looking to land somewhere and grow, we can say we have this system in place, we have these things in place, we are thinking about cyber, and think about how much more secure your company will be in a state that's actually taken a proactive approach to it.

Tamara Shoemaker 12:59

Now I'm really excited about how proactive. So I mean, I've seen that I've seen the development for the last three years and how that's changed. And now it's gone from sort of some small

stovepipe still kind of areas. I mean, you and I have been in meetings where the automotives have told us they want cybersecurity automotive people, you know, we've had to have that conversation with them that says, No, we have to have a generalist and then we need all of the industries then to teach them the specific things or go back for certifications for those specific things because the pipeline needs to be opened up and bigger, not smaller and carefully defined to a specific industry, but something that all of them can use. So that's been my sort of my the things that I butt heads with against—industry partners—love them to death and love their input. But we like as educators, we try to sort of find out where we can where we can fit, what we're doing. And we're the kind of product that we're turning out those students that workforce, how would that well, that fits well. What are some of the things that you've been butting up against that have made things a little bit difficult to get the message out that you know, you'd like to have out?

Sarah Tennant 13:57

So I think there's a lot of challenges that are intrinsic to cybersecurity. So one of the challenges is that everyone understands that it's a problem, but no one really understands a good way to fix it. It's not tangible, it's not a widget. So a lot of what we do in economic development is trying to match a buyer and a supplier. So you're an automaker and you need a widget. So we'll get all the widget makers together and we'll figure out what you need. Cybersecurity... the industry can be a little confusing. There's just so much... it's a buzzword, but it's been around for a long time. It's not like cybersecurity is new. We've been protecting networks for a long time. It's just a lot more prolific now because there's so much more connected. So we're trying to really take a capability, and we're trying to match it with a industry. So, you're saying okay, you're in this industry, this is what you need. These are the capabilities you need. You need someone who's thinking about this but you also need a response plan. And it's not just one thing, it's not just your IT department who needs to be thinking about this, your HR needs to be thinking about it, your communications department needs to be thinking about it, your CEO needs to be thinking about it. So really getting that message across that cybersecurity is an industry that really needs to not just cross cut other industries, but cross cut teams within industries. So that's been really challenging. The other thing is that sometimes companies don't see the ROI in cyber security, they understand they need it.

Tamara Shoemaker 15:30

But like insurance, right, my insurance just in case you get a flood, and it's like Michigan doesn't flood. So why am I having to pay insurance?

Sarah Tennant 15:36

Why am I you know, it's a cost against, it's just something that costs more.

Tamara Shoemaker 15:40

And I think it's just exactly what you said earlier about how we don't think we have a problem, or I mean, you know, what are they going to get from me, I'm just some little...

Sarah Tennant 15:48

Right. I'm just a little company that makes a widget... But that widget could go into a park that leads up to a defense contractor. That could be a national security issue. So I mean it's harder to see that big picture and kind of flow down those regulations within those small businesses. So that's been a huge challenge for us. Understanding that the most vulnerable in our in our supply chain are actually the least prepared for what where they need to be with their cyber security. So I, you asked for one challenge. Oh, I got it, there's a lot of challenges. But I guess the motto is, the bigger the challenge, the bigger the opportunity. So we have a lot of opportunities with these challenges to really change people's mindsets and really get out there. And for Michigan, what we can do is if we can get this right, if we can get our small businesses secured, and we can get our big businesses secured, it's just going to benefit us. It's just going to be one more thing that's a huge asset to this. We will as a state be in a such a better place for having those security protocols in place.

Tamara Shoemaker 16:52

Oh most definitely when we talk all the time, my husband jokes about making friends with the Amish because he doesn't want our he know when our infrastructure goes down, he wants to be able to know how to do stuff. But that again, I'm just like you. I'm very excited about all the opportunities that it presents. I'm excited about... And you had talked about how all levels of the government are involved in this. We are on a couple of committees together now that were put it was put together at the beginning of the summer. And I'm really excited about the work that we're doing in those committees. You're on all three and you're on the planning part of that. That whole focus. Can you explain a little bit about what we're working on?

Sarah Tennant 17:24

Yeah, so these committees are in response to being one of seven states selected to participate in a National Governors Association workshop. So we submitted an application I think back in January now and I say we went when I say we, I mean DTMB. The Department of Technology Management and Budget, took the lead on it. They brought a core group of state agencies including the MEDC, the Department of Ed, the state police, the National Guard, and the Labor and Economic Opportunity Agency so the workforce agency together to submit this proposal to the National Governors Association. The goal of it was to help enhance statewide cybersecurity readiness and response capabilities. And Michigan's workshop is really focusing on workforce development. So it's working to secure schools, building future cyber leaders and establishing K-12 cybersecurity curriculum. So we really are looking at three pillars. And then the workshop does involve personnel from not just multiple state agencies, but from school districts from nonprofits from private organizations. So I know that you've been participating and your input has been really valuable. What happens a lot of times is we have people within the state that are doing this programming, but they might not be in the trenches. So we need the people that are actually within the community, doing the cybersecurity things like cyberpatriot, and having those connections within the community to make sure that we have that input. Because we can develop a plan but if no one uses it, then it's not going to be a really great plan. So initially, the workshop was meant to be an in person workshop. So we would do this series of workshops revolving around the securing our schools and building future cyber leaders and establishing K through 12 cybersecurity curriculum. That has all now been moved over to a virtual platform.

Because of COVID-19, obviously, things in April, March actually, really shifted right. So we went from this world where we knew that cybersecurity was an issue and we knew that we needed this curriculum and we really knew that this was already an issue but then COVID really shined a light on how much of an Emmy changed everything. So it went from you know, kids being in school together, to now virtual learning and people working in offices together to know completely virtual working so as a state employee. I was a virtual worker anyways. But many people were not, so dealing with that kind of remote capability remote working, that we, you know, that we didn't have to deal with in the past. So really the workshop has been, it's been great. It's been great trying to develop these programs because what we recognized early on is that Michigan is doing a lot of really great things. And we really are leading in a lot of things, but we're doing them kind of independent of each other. So we have groups up in the UP (upper peninsula) and maybe on the west side of the state and up in northern lower and they are all focusing on this. We have a lot of people that are that have a focus, and we have champions in the communities that are doing these things, but they're doing them in a silo. They're not recognizing that there's other people that want to do them. And we know that schools are interested in it, they know that there's a need, they hear about cybersecurity and they want to do something but they don't have kind of that centralized space where we can have that like list of who's doing what well, and what schools are doing things and you'll hear about a couple of them and, and that's great, but we need schools that maybe want to get into the space and don't know how. We need to help guide them. Or we need to not necessarily guide them, but help to provide resources so that they can make decisions on their own. So, oftentimes, you know, what happens is I know a lot of people in this in this world, so people, if they can get to me will say, Hey, where do I start? And I'll say, well, you will, you got to talk to Tamara, you need to talk about CyberPatriot. And, and get involved and you need to maybe get involved, talk to your local Cyber Hub. Get involved with some of the people that are, you know, already in the space, but they don't know. I mean, I can't talk to everybody in the state!

Tamara Shoemaker 21:18

Pretty close, but not all. But I mean, it's the whole how did that intake, how do they even know that you exist? And so that's one of the reasons for you being on this show with us. I really want people to know that we have this great resource. We've had this great resource quite some time, and you're not just working the auto industry and only that or the or the defense contractors and all only that, you're working on a variety of mom and pop I mean... I get you guys' newsletter every week. And it's always so great because you have all these great announcements about people who've gotten block grants, and people who've gotten small business grants and people who are doing all kinds of really innovative things all across the state. So I always enjoy reading through that. But, again, it doesn't actually point out that, hey, we've got a cyber person who you can go to for a lot of the information. And again, that would be also spread too thin if you were the only point of contact for the whole state on cyber. So it's really cool work that we've been doing and we've been working on it all summer. And then we're going to go actually live in November with all of our results, right, and we're going to then have input from all of the communities that you spoke about, so that they can come in and They can tell us okay, well, you've got all of that Okay, but you forgot this or that, or how about if we add something innovative that we hadn't thought about at the time. But it's a really cool group of

folks from all of the different agencies with so everybody is coming at this with a different lens. And so because of that, I think we've made really good progress. And we're also not just doing resources that are only in the state of Michigan, while we're wanting to amplify and make sure everybody's aware of those, we also are making sure that we went across the country looking for all the resources that are available. I've often said, our teachers in Michigan are saints, they are amazing the things that they do, and the things that they put in are just amazing, but they can't do this by themselves. You know if we're gonna make a cultural change, we definitely have to start in K through 12. And we have to, you know, build that pipeline from birth on. So, so that, like you said, we make this cultural change and everybody's integrating it into their everyday life, not necessarily that they're only studying cyberpatriot, cybersecurity, but that they are integrating this into all of their thinking whenever they're doing anything. And so having all everybody at the state level working together instead of in silos, bringing an industry bringing an education, you know, all the folks that are innovators in the state all in one place. This is just wonderful. Instead of the normal thing, which would be like you said, Yeah, here's the new proclamation from the government. Now do it.

Sarah Tennant 23:38

Yeah, that doesn't doesn't always work.

Tamara Shoemaker 41:33

No. Well, you know, people get work done. I get that and we get a starting point. I mean, no, we wouldn't have become a center of academic excellence if the federal government hadn't had said... I guess they're going to be doing they just did their 20th anniversary. If they hadn't 20 years ago said hey, there's a problem. We need education to pay attention and we need them to start focusing on this cybersecurity thing. If they hadn't done that we wouldn't have gotten started. And so we did have a last year they did put out a state cybersecurity guideline for teachers. But again, because I'm working with them across the state all the time with the CyberPatriot thing. They did the whole Yeah, well, okay, we have this this guideline, but where do we start? Right? What do we do? What's our next steps? And so I was so excited to be brought into this committee. I'm sitting on two of them and a leadership one in the in the curriculum one, I'm leaving the techies to worry about securing the schools.

Sarah Tennant 24:30

Well, we'll let the technical experts deal with that.

Tamara Shoemaker 24:33

Oh absolutely that's it, bless their hearts, they they're good at that. It looks like you got a really great guy who's who's leading that charge too. So that's really cool. But it's been an eye opener for me to work with all this, and to be on the boots on the ground. I've done that at a national level in a couple of communities for software assurance and some other things but it was very refreshing and very wonderful to work with all this and have all these different kinds of people with different lens Again, that's how you make a problem go away. It's not the same people looking at the same problem over and over. You know, that's the definition of right. We don't really want to be thought of that way. And so it's been nice. It's been hard work, but again, one

of the one of the results of COVID is two things, right? Like you said, it's made it more forward in people's minds. And real, right. So you and I are both running across the state always trying to give everybody awareness about it, the sky is falling, the sky is falling, you're connecting to everything. And cybercrime is in the trillions, it actually out numbers drugs, as income for criminals, it's like boggles the mind. But this COVID has made it so much more real and so much more what apparent that that's helped. And it's also COVID is also like you said, since we have to meet virtually instead of a hauling up to Lansing and stuff where most of the folks work. We're all we're able to do it more often.

Sarah Tennant 25:44

Absolutely, absolutely. So we've been able to do this through a virtual convening. I'm not gonna lie I miss in person convenient, but I recognize that right now it's not the safest way to convene people. So it has been a benefit to be able to meet virtually and meet often it's, you know, you can coordinate schedules because there is no drive time. So, we really have been fortunate that we were chosen by the NGA and then they've also been like you said, they've been able to connect us with other states that have similar structures to Michigan the way that Michigan's education system is that have been part of this program. We're not opposed to taking appropriating what's working in another state and bringing it to Michigan.

Tamara Shoemaker 26:25

Well that's a serious form of flattery, right? It's working great for you know them then it can be even better for us.

Sarah Tennant 26:30

And then ultimately, with this industry, what is nice is that there are multiple entry points, right? So when as we build this cross collaboration, really the goal ultimately is to, to build this talent pipeline within the state to keep it in the state. And then people can work where they want to work. So it just it really does ultimately come back to that greater goal, but it has been great working with others. I've been working with other state agencies for years. And collaboration really is the key for cyber, like, you have to be able to collaborate, you have to be able to communicate, and everyone says they want to collaborate until you actually get them all in a room and then it's not so easy to do. But I think that this group has really done a fantastic job at looking at what each of us does well and what each of our roles are, because we are going to have to be more nimble. We are going to have to be more creative in our processes. Because while we understand the cybersecurity is important. Right now we have educators that are just trying to educate in, right, so we're asking them to put one more thing on their plate. So the more that we can do to make it easier for them, is really the goal... is to provide them with options so that if they want to do these things, they have resources to do that. So that they don't have to do all that factfinding themselves because quite frankly, we're asking people to teach in an industry in an in, in a subject that didn't exist for them 10 years ago. No one was thinking I'm going to be a cybersecurity teacher. And quite frankly, because cybersecurity has a zero percent unemployment rate. It's hard to find people that maybe want to get into the educational field, you know, we're not going to have those technical experts. We don't need them to be technical experts. We need them to understand the concepts we need them to be able to teach.

And that's really, to me one of the other things that have come out of this, I don't have a cybersecurity background, I am not a technical expert. If I was, I probably wouldn't be doing economic development for the state because it would be much more lucrative to do something else. But what I have is I have the understanding, and I know a lot of technical experts. So really, it's for people to understand that even if they don't have an IT or a cyber background doesn't mean that they're not a good fit for a cybersecurity career.

Tamara Shoemaker 28:49

So, again amen, sister. Yeah. Exactly we want people to know what I want message.

Sarah Tennant 47:37

We need artists, we need musicians, we need the people that think differently because cybersecurity has a technical aspect, but there's a lot of problem solving and critical thinking and thinking ways that other people don't think so. The other thing that we've been looking at from an MEDC standpoint, I know we talked About the pillars in that equitable, high wage growth. The other thing that I really want to drive home is that we've been looking at how do we recreate a more diverse cybersecurity workforce? How do we look at racial barriers and economic barriers and regional barriers? How do we really start to be meaningful and mindful in, in helping to bridge those gaps? So we have created those CyberRange Hubs within the state. That's one of our assets. On the west side, you know, we have the West Michigan center for Arts and Technology, for example, really looking at that looking at the underserved population, and what does that look like? Our lieutenant governor came from Microsoft. So he's a tech guy, and he's beating that drum as well in our governor who is really wanting to look at it women and women in cyber technology. I know Tamara you have been with a CyberPatriot program doing fantastic things with trying to diversify who it is that's getting into this industry. We can't have just one mindset. We need multiple mindsets, multiple backgrounds. We need folks from rural areas, we need people from urban areas. I mean, it's so critical for us to get this right. And I love what you guys are doing. And I'll turn it back on you. I heard about what you were doing even with folks that were on the older generation people that you know that that maybe they're retired and they're looking for something to do, let's get them involved as well. They all have, you know, people, we need everyone involved. We need everyone to be thinking about cyber. So we have really, myself and our agency has really been you know, tried to be mindful and having meaningful programming that is really starting to look at that. That gap and diversity inclusion specifically for me in the cyber industry.

Tamara Shoemaker 30:48

I totally agree. I mean, it's definitely something that's a really, really important piece. And the thing is, it's untapped talent. I talked about all the funnel, we have a funnel system sort of in the educational and industry, right where you know, we have a bunch of people that come in, and then just a slow drip comes out at the bottom. It really needs to be a firehose. Let's just be honest here. The problem is huge, and we need to put out the fire. We don't need to have a funnel dripping down one drop at a time, we need a huge base. And like you said, not only do we need a diverse workforce, but we need to make sure that everyone understands that the jobs in this in cybersecurity are very wide. So the NICE framework really does a really good job

of explaining all the different kinds of works, right? And people still have this real mindset. You know, you must love to code, you're going to be stuck in the basement somewhere in some IT shop, and it's going to be boring and awful and what have you, and it's like, we still need those folks. Absolutely. We still need people who can code we still need all these people who can make sure that applications are working together smoothly, make sure our networks are good. But we also need folks like you said, that are independent thinkers, that are creative, you know, the bad guys aren't throwing just one kind of person. It's no thing you know, they're throwing all kinds of stuff at this. Whatever sticks, right, you know, and so we really have to think differently about all of it really and how we go at it. And how we talk about it. You know, I can't tell you how many times I've gone in and talked to a principal or, or an ISD. And, and they basically said, well, we're teaching compsci and I'm like, computer science and I'm like, okay, that's great. I'm so glad you're a forward thinking computer science, but do they have any elements of cyber? And are they talking about cyber in a way that's more holistic? And that there are much more jobs? Like you pointed out, people in HR need to know about this. Right? We need to make sure that they're doing really good backgrounds on people because we might be hiring the bad guys and giving them the keys to the kingdom if we're not careful, right? We have IP Here we are in automotive country, right? Where IP is king, right, all of their, their proprietary information is very, very secretive. And yet they have an awful lot of folks that are working on that that absolutely have no background and don't understand what cyber security is at all. And then like you said, it trickles down to our poor teachers where it lands on their back that they now suddenly need to be an expert in all that when I know working with them that a lot of them aren't even IT savvy, hardly. That they got tapped in their school because they were the person who knew how to use Facebook. And so they got, you know, the IT load. So I it's very heartwarming to see that at the state level, we're working on these projects, and we're working on something that can be some some actual real bonafide, not just a guideline that we hand them, but a real resource that they can actually use. And I think one of the other things that I was really impressed with working on this committee was the fact that when you were working on what is a leader, what is a leader in cybersecurity look like. You know, when we turn out a graduate, what are what are we looking for? And what are the different levels, right, so one of the things I love about CyberPatriot is there's three levels, you know, beginner, intermediate, and advanced so that everybody can get in this game. It's the same thing of what you guys are doing with this, these committees and resources and encouragement to schools to get into this game. You can be a beginner, not have a red hot clue about what this all is, but know that this is something that you want to start integrating into your system, your school system and be able to look at these resources. And get in touch with all the people that were going to have working on this project and say, Okay, what are my baby steps? Where do I start? And how do I build on this. And here are all the resources to be able to do that here are all the success stories across the state. And here's the contact information for those folks. So you truly have that resource. It's not just sort of this big dry pronouncement. But it's an actual thing that folks can do. So I mean, it's very exciting. And then at every level, right, so because we do have champions that are doing amazing things. But hey, they also want to bring their game up and continue doing what they're doing and offer as many things... I've got coaches who come to me and ask me, is it okay if my students, you know, we're doing CyberPatriot Is it okay, if we do the governor's challenge, and I'm like, Oh, please do? Yeah, Number one, I want to show everybody in the state level, how

great the CyberPatriot kits are, but number two, I also want them to do everything that they can possibly do because you don't know which one of the things is going to inspire someone to greatness and, and the different pieces and parts of it. And same thing for the diversity, right? If you don't bring in a diverse crowd, and then and then expose them to everything you can possibly expose them to, we're just not going to know where all our champions are.

Sarah Tennant 35:18

Uh huh. We don't know where those great leaders are coming from. They're coming from everywhere...

Tamara Shoemaker 35:21

But we want to develop them. I mean, it's perfect. We've become good friends and why this is working so well—a mutual admiration society here. But I mean, it's very encouraging. I do travel the nation and internationally talking about this, and I gotta tell you that it's comforting to know that when I come back to Michigan, for the last five, six years now, I've been focusing on Michigan. In the beginning, I was definitely doing way more awareness than I am, as far as you know, what cyber is and how it can be, you know, affect you and all that kind of stuff. And then like you said, Now with COVID, things have just sped up. You know, I mean, how many moms are out there going? Oh, my goodness, I used to limit my child's online time, and now they're sitting in a desk, online for school for, you know, five, six hours. What am I going to do?

Sarah Tennant 36:07

It's funny, one of one of my co workers was saying that, his kids are online. They're doing virtual school. So they're online all day. And typically they have a movie night and what movie night came in? They're like, yeah, we don't want to watch movies. Now. We're good. We've had enough screen time. So I think it's going to really shift there's going to be a lot of shifting. But I think one of the other points in it is that we have people from all over the state, like you said, We have people from all of the states. So this is giving us an opportunity to talk about our rural areas in the state. So I know CyberPatriot and the governor's challenge—we've mapped some where some of these schools are. I think it's interesting that there's a lot of schools in our most rural areas that do the best and this right because it's one with these programs There is that low barrier to entry. So they don't, you don't need a lot of equipment, you just need access to the internet to be able to start participating in these challenges. Sometimes with some of our other competitions you need you need to have, you know, there, it's expensive, there's a lot that you need to be able to do. So this with the cyber programming, it really is that really great opportunity to get this high tech career on their radar, and they can start thinking about it and they can start participating and there's all these free assets online. There's these free programming online, to get them interested. And like you I get to travel, not just around Michigan, but I get to travel the world and I get to Well, I did before COVID

Tamara Shoemaker 37:21

All of us are grounded.

Sarah Tennant 37:23

Yes. But really, you know, that hasn't stopped us. So for example that MEDC has partnerships with countries like the United Kingdom and the Netherlands and Australia, and we've been doing webinars with them. And one of the webinars that we did with Netherlands is now focused on automotive cybersecurity, so that cybersecurity in Michigan and what we're doing in that space. So getting the word out that what Michigan is doing. I have yet to have a conversation about cybersecurity in Michigan without talking about the workforce piece or talking about the talent piece, because it's such a critical component to what we're doing. But really making sure that people understand what Michigan is doing in this space and how advanced we are in this space. And how our industries, even our core industries are changing, ultimately, into tech industries.

Tamara Shoemaker 38:11

It is amazing, but like you said, you made a great point about how this affects everything. So I mean, people who are in oil pipelines and bridges and water and I mean, there's just anything, there's nothing that it doesn't touch and so making sure that everybody's got as much information as they can about this subject. And like you said, even if it's not something that they don't become a cyber security officers, cybersecurity analysts, they're not that, but they're a cog in a great greater good and they're doing their job if they have that awareness they may not. You know, one of the main things that we have problems with still is spam emails, right and people clicking on the attachments and not great passwords because it's too hard to remember and all these kind of really, really basic things that continue to be problems in the workforce. If we were teaching them, which we are now you know, K through 12, you know, little that that information is important and that you know that hygiene, I talked about it as being hygiene, right, cyber hygiene is important, makes a huge difference is going to make a huge difference in our workforce. The fact that this is not something that they're surprised about and that they're actually in tune to now in in this area is a very heartwarming to me. I'm very excited about all of that. Is there anything else that you think that you'd like to talk to the to our viewers about?

Sarah Tennant 39:21

So I would encourage people that are looking to get more information to connect with some of folks that are out there. So feel free to connect to myself or if you're looking to connect with the schools, Tamara you are a great connector of people. And then if you're a business in Michigan that is looking to grow, or if you are a business from outside of Michigan looking to locate into the state, visit MEDC's website at www.Michiganbusiness.org. Not only do we have information off of all of our programming and our different grants and different programs available, but we also have resources for small businesses. We have links for small businesses. We have all kinds of information on there, both specific to COVID and and specific to Michigan businesses.

Tamara Shoemaker 40:02

Wonderful, Sarah, that's great. And I'm encouraging everybody to definitely take Sarah up on her offer and check out any MEDC's website. And look for more information. Again, you can sign up also for that newsletter that I get, which I love. It's very, very informative about all the cutting edge things that are happening in state. That's also really good too. I really thank you for

your taking the time out today, Sarah, to join us and giving us a glimpse into what MEDC is doing and we will talk again later date, I think probably to sort of get an update if that's okay.

Sarah Tennant 40:36

Absolutely. It was great talking to Tamara.