Voices of Sustainability: Season 1, Episode #6

Phillip Schlies

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Intro

Hello and welcome, I'm Phillip Schlies and you are listening to the Voices of Sustainability Podcast. Join us as we delve into the various strategies and challenges faced by the government, businesses, and non-profits, all striving to balance economic growth with environmental and social responsibility.

This season from the University of South Carolina, our reporters are all business majors at the Darla Moore School of Business with a concentration in sustainability. They'll be talking with various organizations to highlight how they're working to improve the world we live in and conserve our natural resources.

To explore the topic of sustainability, the episodes will explore how each person being interviewed defines sustainability, how the success of sustainability initiatives are measured in their organization, the motivations to be sustainable, and how to have a positive impact in your career. The conversations also provide insights into topics such as, circular economy and recycling, innovation and technology in sustainability, as well as regulation and policy that are influencing this space.

On today's episode, our reporter Emily Brasseur will be speaking with Trane Technologies' aftermarket engineering leader, Tyrone Ellis. Trane Technologies is a company focused on improving heating, ventilation, air conditioning, and refrigeration systems, all to be more sustainable. We'll dive into the importance of efficient cooling systems, Tyrone's own sustainability journey, and Trane Technologies ongoing projects. Let's get into it.

Script

Emily Brasseur
Welcome, I'm Emily Brasseur and today we're going to be diving into all the details about a local advocate who has a large impact on sustainability in our community. Join me as we get to know a little bit more about Tyrone Ellis.

Tyrone Ellis
My name is Tyrone Ellis, and I'm with Trane technologies and we're a global climate innovation company, we're currently a sustainability company focused on climate solutions for our customers and reducing their carbon footprint new to our technologies and services, and then all that good stuff. When it comes to heating and cooling environments, it can be buildings, it can be homes, it can be we're in a lot of data centers, or in a lot of different types of applications. So that's what we do for the company. I'm the aftermarket engineering leader for the Americas. I've been with the company for about 12 years now and this is my fourth or fifth role with the company but certainly sustainability is what we do as our focus as a company.

Emily Brasseur
Can you tell us a little about what sustainability personally means to you?

Tyrone Ellis
Yeah, sure. So, you know, I actually, it's interesting. I've been very interested in sustainability probably my whole career, you know, my wife, and we're kind of a sustainability Engineering Family, which is quite interesting. We went to that other school up the road Clemson University, but big fans of a lot of work here at USC. But when we graduated, when we got married, shortly after we graduated college, my wife got a position with Milliken, actually based here in the state as an environmental specialist. And, you know, I, we never quite heard of that role. It was a new role for them. And that's when I started doing research, they had wasted energy projects and things they were doing around and trying to have waste control within their sites and they were one of the early adopters and going back quite a few years ago, right. And so as I started learning more about that it get definitely and this is something that's pretty interesting, and I think is going to eventually become a forefront, especially if you think about the opportunity in this space for businesses, partnering with conservation organizations and government agencies to come up and do things better than we've done in the past. So, for me, I got excited about it early. So we were early adopters, and our family is all in on sustainability as a result of that. And so my wife is a senior scientist for a conservation company out of Washington, DC, and I've actually been leading sustainability at multiple companies now for probably the last almost 20 years.

Emily Brasseur
So now that we understand a little bit more about your perspective, and how you carry it into your company in your personal life, can you explain how you carry that into your work life, but for someone who doesn't understand much about sustainability or know much about sustainability.

Tyrone Ellis
What I actually do, my teams that I have across the US, they're responsible for what we call the product lifecycle. So, when we sell a piece of equipment like here in this building, has heating and cooling equipment, probably on the roof and so forth. So, after it's sold to a customer and installed, then my team kicks in to support that product for the next depending on the product could be 20-25 years, right parts and service and things of that nature. And so, if you think about

that, that piece of it, you know, that's the kind of the operating cycle where emissions for because there's refrigerants and other things are involved and heating and cooling equipment, that's where most of the impact comes from during the youth cycle. So how we maintain equipment, how do we you know, service equipment? How do we make sure that we have prediction, use data, AI and analytics to try to get in front of that and to understand your problem before we even know you got a problem and get parts replaced and ensure that we can minimize negative impact to the environment. You know, we want heat in nice comfortable buildings, but we also want the equipment to be efficient, so that we can minimize the impact negative impact in to the society.

Emily Brasseur
What fueled your passion for STEM and sustainability? Was it something that started early on in life or something that was more recent through college and your adulthood?

Tyrone Ellis
Really, for me, it was early on, I hate to see is like litter and things are on the road. And you know, I've always been a big advocate of having, you know, students or members of my teams go out and we you know, we can adopt a highway we do clean up and they kind of get stuff. But I've always thought why would we want to do that and mess up the environment would do these things. And they make such an impact. And then over a year I think younger my career you hear that some of those pretty poor horror stories right around a company who not knowing any better or there's some type of chemical release into a river or impacted waters or our land or something with just whatever it is that they're producing, or maybe the output of some type of waste stream of what they're producing. and it makes an impact in the communities where people, and especially in underserved communities. And so that's been a real passion of mine to try to prevent that, you know, because I think it's takes off the whole community to get behind that. So it started when I was younger, but then I had an opportunity to learn more on how I can do that on a technical basis. And when it comes to sustainability is really also excites me.

Emily Brasseur
Yeah. Yeah, that's awesome. Since you mentioned that you went to Clemson, What kind of courses did you take that helped you further your passion for sustainability? And what do you think prepared you most for your career in a sustainable company like Trane?

Tyrone Ellis
Well, I think this is an opportunity for all universities and I think that's changing now, more recent times. And when I was in school, electrical engineering was my major. When I was in school energy distribution was one of my focus areas, and my junior and senior year, we all had to pick focus, mine was power electronics, and energy distribution, when you think about power going from the substation, to your home or to a company, right, that was kind of where my focus was. And so how you do that efficiently? And we just spent a lot of time and how efficiency of that energy moving to residential homes, and so forth. And so those kinds of things really are the classes that I took that helped me kind of connect the dots on how we can use technology and to help the meet with sustainability efforts.

Emily Brasseur
I saw a little bit on your website that you have skills and like Lean and Six Sigma and supply chain management. So how do you feel that these skills have particularly helped you at your organization with sustainability?

Tyrone Ellis
I'm a leanzellic, transalean, all about Lean, we call operational excellence, and the playbook around that. But if you think about Lean, you know, in the forms of waste, right, there's all types of ways where that can be you know, weight time, defects, you name it, you know, lean helps to eliminate that right and drive waste out of out of processes, out of what we do, and so that, that can be incorporated in sustainability best practices. So, when I was at a prior company, I was the plant manager for a remanufacturing return center. We would get products returned from the field and we created a Value Stream Map if you're learning lean, but you didn't learn about that terminology. But we did process mapping to figure out what's the most efficient flow of how we handle a lot of material, right. And we actually end up separating that materials in a waste stream. We could actually, we had a lot of visual management around that we can make sure that batteries go in the right place, we can make sure that plastics go in the right place. And by doing that, we can also make sure that they're recycled in the appropriate manner, right? So, whenever you mix all that stuff together, that makes it very inefficient to try to recycle that material. So, by putting our lean hat on, we said, okay, let's make the most efficient way to do this. And three new good visual workflows for that waste that can be used to actually recycle. And we actually were a zero-landfill site. You know, people are still trying to get there and some companies, but I've been with some companies that were really thought leaders in this space.

Emily Brasseur
Have you ever done anything in your past employment with carbon counting of the emissions?

Tyrone Ellis
Well, we actually have a group that's at our corporate office that that's what they do is their focus, right? And so, they have the businesses who, you know, we have targets they all the businesses have, and they help us to figure out carbon counting and how you know, what we're doing. What's the biggest bang for the buck? You know, one thing we're working on right now is something on circularity. And the concept of circularity, you know, there's teaching and helping people understand the benefits of reducing body carbon, when you actually reuse, remanufacturer a part or, you know, or design it in a way it can be reused two or three times right, in its lifecycle that creates tremendous benefit for embodied carbon. So, trying to figure out that that calculation, and we do scientific base calculation, so it's not only do we do it, we actually have it verified by third party. So that's a big deal for us.

Emily Brasseur
So, how do you think that your work and your organization now has encouraged your children to pursue a degree in stem like yourself and your wife?

Tyrone Ellis
Yeah, for sure. I mean, this is all they've seen their whole life. We've always been a big focus on recycling, and our home, we actually compost. I certainly believe that if you can, you know, teach kids that early and people that early on, it makes sense to them, and they really embrace it and because it's part of their DNA and what they what they want to do. So, exposure is really important. That's the key takeaway.

Emily Brasseur
So on your company's website, they talked a little bit about the amazing sustainability efforts that y'all are making. So can you talk a little bit more about the Gigaton Project, the challenge that Trane has started

Tyrone Ellis
The Gigaton challenge, so when we formed train Technologies as a pure place sustainability company, we did something called the gigaton challenge, and we're going to reduce our footprint for our customers by one gigaton, and that's a real somebody asked me now, is that a real number? Or is that just like no, we're talking about a real true Gigaton, right? And so, it's about the size, I think three or four European countries, their output of what the tribute for emissions. And so, this is a big deal for us. And you know, we're a large company, and with a global footprint, so by making that commitment, and then when we made it, we didn't know how we were going to get there. But what we did was set the target for our talented people we have around the world. And it's amazing the ideas that come up it just blows your mind. The gigaton challenge, we are actually on track to achieve it by 2030. So we're excited about that. But it starts off also with us modeling the right behaviors. So, if you look at our own sites, in the US, we probably have 80%, if not more now, of our sites that are zero waste to landfill, if you go to our site here in Columbia, we've got solar alternative energy there on the roof, we do that on our site in Greenville that we just launched last year as well. So, you know, for us, it's you got to walk the talk. So yeah, we can do things and design and really help improve our customers. But we also want our employees to see that we're, we're all in right, so we're going to make sure that our internal sites also are doing the same thing.

Emily Brasseur
With that being said, what role do you specifically get to play in this challenge?

Tyrone Ellis
Oh yeah, So all the businesses have targets to contribute to those challenges and so one for us is something called refrigerant reclaimed. So if you think about a piece of equipment is being repaired, or maybe it's going into life, or whatever it may be, you actually try to collect do we have processes where we collect that refrigerant that's coming out of that equipment, and then you can bring those back to our retail stores, and what we do is, you know, we certainly get benefits to our technicians and other organizations that do that. But we'll take that and we have a supplier that actually picks that up and they recycle that for us and bring it back to our stores

clean and we can reuse that in the field. And so that's a big one for us and how we contribute to the gigaton challenge. Another one is remanufacturing, I've mentioned what we're doing around that really putting an increased focus in that space. So, we want a part to be used a second and third or fourth time if possible. It creates a tremendous benefit when for the Gigaton challenge when it comes to reducing the body carbon apart and emissions over both the product.

Emily Brasseur
So, is that a way that y'all are decreasing your scope three admissions with your customers?

Tyrone Ellis
Yeah, good question. Yeah, so scope three is the next horizon for everybody but I think yeah, that is one way. Certainly we reuse materials and new design to think about aluminum and it's a big topic, because the aluminum is one that has a lot of body carbon emissions that, you know, reusing aluminum, and steel, who are products. Those things are really a big topic for us when it comes to especially scope three.

Emily Brasseur
I know you said that you guys do celebrations whenever you reach your goals for the challenge? How does your organization measure the impact or effectiveness of your sustainability initiatives?

Tyrone Ellis
It is through data. As I mentioned a little while ago, we actually it's all about data and having real targets that scientifically verified that is really important. But you can see on our websites some of the awards that we've been given because of our science based verified targets, we actually have a sustainability Advisory Committee outside of our board, you know, we have a board, of course, as a publicly traded company but we also have a separate science sustainability advisory group that our thought leaders from around the world. We certainly believe a company can change the industry, and the industry can change the world. And so that's one of our taglines, we like to talk about and so we want to make sure that we're leading by example, with those science-based targets that again, externally verified.

Emily Brasseur
Can you talk a little bit more about what personally motivates you to continue pursuing sustainability within your organization, other than just how passionate you are about it, such as measuring success, celebrating success, or overcoming challenges?

Tyrone Ellis
Well, a couple of things in coming to mind there. One is, I love to see the light bulb go off for people when they get excited about when they recognize, now I get this right now I can see how I can contribute, how I can participate in this. And so that's exciting for me, though, to see people really get it. You know, we've been doing Lean and things for a long time, but when they see the intersection of how all that works, and how lean can support the sustainability and our effort

toward the Gigaton challenge and effort toward leading by example, and our efforts towards sustainable features, which is another big thing that we talk about a lot, and is how do we open up new doors for our community where we live and when we have, you know, where we have a presence. So that's a big one for us. I love seeing the light bulb go off for people in that space. The corporations have a responsibility to lead by example there and do that. And I'm proud to say I work for a company who's at the forefront there. That's pretty exciting for me.

Emily Brasseur
I also saw a little bit on the website as well, that volunteerism is very important to you. So, can you tell me a little bit more about the Black Employee network and your involvement and their engineering related nonprofit organizations? And if sustainability is something that you strongly associate with your work in that aspect?

Tyrone Ellis
yeah, so it's kind of like aligns with our something As I said a few moments ago about our opportunities for all right, we have something called sustainable future. This is one of our key initiatives. But we really believe that we want everyone to feel a part of the organization when they join our company. And so, we believe diversity is key. Just to tell you a little bit about some of our goals, we have a goal by 2030, that half of our leaders will be women 50%. By 2030, we have ERGS, employee resource groups, like the BEN that you mentioned, we have the Women's Network, Latino network, we have all types of affinity groups. And the intent of that is to everyone should feel like they're a part of the company. And so, this gives them opportunity sometimes identify with folks that may have similar backgrounds to them, and so forth. But we also promote in our affinity groups that we want people who have different backgrounds, right, if we come together, and we learn from each other. And so that's what we're all about. But when it comes to the engineering side of it, one thing we do with BEN, and my role is executive sponsor of National Society of Black Engineers, which I'm going there next week for the National Conference. You know, we do a lot of work in the community where we have our presence with Nesby Junior, which is, you know, students before they go to college and stuff. So that's one example, we have another program that we sponsor that we're a big sponsor of called Project Scientists, which is all about girls from the third to fifth grade. And so, we were just in Charlotte and now we're like all over the country, we teach, and we do all kinds of experiments with them and support that initiative, we do a lot in the community around this space, and our employee resource groups have to contribute to that. And that's an area that I have a lot of passion about, if you can't tell, I really believe that even as an executive of the company, you may be in there next week is important so I can talk to the students and help encourage them.

Emily Brasseur
It seems like encouraging children to pursue a career in STEM and sustainability is something you're really passionate about. So, which leads me to my final question. So, what is one piece of advice that you would give to students or children wanting to make an impact in their careers?

Tyrone Ellis

Yeah, so for students, first thing I would say is seek out professionals, you'd be amazed, I always tell people about networking. Network, network, network, it's important to help you to try to figure out where you want to take your career, especially if you have a passion about something, find those people who will talk with you and give you some insight, and find those companies that have the same kind of mission that you're passionate about. You know, for younger kids I always think it's important for companies like mine to be accountable to be out there, and outreach. And so that's why we're such a big advocate of people of letting our people go volunteer, right, and they get paid to go volunteer, which is pretty rare. And so, we want to try to touch on people, we know that that third or fifth grade range, and Elementary is really important for us to influence someone to go a certain direction, right? You know, sometimes parents just don't have the resources, they don't know, right? We can come and come into the school and you know, and share some of that we have some our online stuff that we put together, material like Discovery Education, we got a whole sustainability group of modules that are for students, young people, and so we've used them in Nesby Junior. We use them for project scientists was used in other places, I did want to indoor air quality with a student and so we get to see the professional and in the student talking about their passion, I think the person was in high school. So, they're really students, right? Just to take advantage of that those type we offer that for free for everybody. So, it's on our website, and we love for people to tap into that. We've got to do more outreach, to hopefully more companies will follow us in that space. And, you know, go and try to help students and parents get more educated in this space.

Emily Brasseur
Oh, that's awesome. Well, thank you for taking the time to share a little bit more about your personal sustainability views and we really appreciate it.

Tyrone Ellis
You're welcome

Outro

Thanks for tuning in. I hope you've enjoyed getting to know Tyrone and learning more about Trane Technologies. Their commitment to sustainability is not only driving innovation in climate solutions but also helping businesses reduce their carbon footprint and improve energy efficiency. However, that’s all the time we have today. Tune in next episode to hear our guest from Sustain SC discuss how they balance conservation and business in South Carolina. Thank you for listening and we will see you next time.

Tag

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