

Paul Thies:

In the corporate world, arguably there is no shortage of attention on climate change. Investors no doubt play a significant role in promoting positive changes to environmental impact, but given the momentum on this topic, it may be asked: how might an organization translate that attention into real action and real results? Hello, I'm your host, **Paul Thies**, and on this episode of If/When, I'm joined by **Hollie Schmidt**, Global Solutions Director of sustainability, resilience and climate response for the Americas region at Jacobs. Hollie and I discussed the need to put talk into action when it comes to sustainability, and she shares what she has learned in her career on how to help organizations achieve tangible results and avoid pitfalls in their sustainability and resiliency efforts.

Well Hollie, thank you so much for joining me today. I'm looking forward to talking with you about sustainability and resilience. And the title of this podcast is From Ambition to Action, so we're going to talk a little bit about not only what sustainability and resilience are, but how do we help organizations move beyond just talking about it to actually doing something about it? So thank you so much for joining me today.

Hollie Schmidt:

Well, thank you for having me. I'm really excited to be here.

Paul Thies:

All right, fantastic. Well, so as we were preparing for our talk, you were telling me a little bit about how there can be some confusion or conflation where people think sustainability and resilience sort of mean the same thing, but they really don't. Can you help us unpack a little bit what's the difference between sustainability and resilience?

Hollie Schmidt:

Sure, and I deal with this question a lot and clarifying between the two, because we're really trying to achieve both. And when we talk about sustainability we're really talking about, how can we be more efficient in the way that we develop in our planet? So I think about the three environments, the physical environment, which includes natural disasters, the physical infrastructure, everything in our physical environment, the human social environment, and then the business environment. So when we're operating in those environments, how can we be more sustainable? How can we achieve net zero, net positive outcomes, and how can we lessen the impacts of our actions? So that's how I think about sustainability, what we're doing to those environments.

Resilience is about what those environments throw back at us, whether it's a hurricane or drought and drying up of our aquifers, whether that's a pandemic. We all really learned a lot through the pandemic on what resilience really means. Whether that's the impact to our supply chain and things that impact our operational efficiency. How can we be strong and hardened against those shocks and stressors? How can we alleviate those vulnerabilities? So resilience is really about, how can we be prepared for those types of threats to our environments?

And you really want them to work hand in hand. We want to achieve resilience through sustainable solutions. So for instance, you could have a seawall that helps with sea level rise and impacting surge, or you can build a naturalized living shoreline. A naturalized living shoreline as a sustainable way of achieving resilience. Then when we look at sustainability and say, being more water efficient, where we're introducing water recycling and water reuse, that's actually introducing resilience into your water supply. And so those two things should work hand in hand, and I encourage our teams and our clients to think about them as zippered up together.

Paul Thies:

No, that's fantastic. That's fantastic. So I think a lot of what we see, and maybe this has been pushed by the ESG mentality and investor level and whatnot, but there's a lot of talk obviously about sustainability and resilience, and this gets to the heart of our episode today. But there's a lot of talk, a lot of attention, but talk is cheap as they say. What are some of the organizational pitfalls that can lead to inertia, and how do organizations overcome those?

Hollie Schmidt:

Well, and that really goes to the title of our podcast, bridging that gap between ambition and what you're committing to and what you're saying publicly you're going to do and your intent, and actually driving that into your business and being able to demonstrate and measure and prove out your actions to get the credit for that. And this is a big space of where I operate. I deal with the C-suite, the leadership levels of our clients, and it really needs to come from the top down. So the good news is that people are out there making their ambitions and their commitments known, but then it really needs to roll through the organization to effectively take hold.

And so two of the greatest things of inertia that I see is the business as usual mentality, and, "We've always done it this way. This is our most profitable way of doing it. Why should we change?" And penetrating what I call that dense clay layer of your organization. So you've got this top leadership saying, "We're committed to doing this. We want you to figure it out." You have a lot of mid and young level staffers that are champions of sustainability and resilience, and they're trying to figure out how from the middle out can we kind of impact this? But it's really getting through that business as usual dense clay layer, and saying, "You know what? We have to change the way that we're doing our work." And that is driven by changing your governance structure, changing your mandates, changing your incentives, changing your accountability structure, and how you're enforcing it and tracking it.

And that is really a ripple effect that goes through the very heart of your business operations. And I like to think of it as... I've been around for a while. I've been at Jacobs for 23 years and practicing for 28. I remember when the health movement and the safety movement really took hold in the early two thousands, when safety became a huge cultural shift for many, many organizations, and Jacobs is one of them, and that really drove into the business. We started every meeting with a safety moment. We have lots of different safety awareness campaigns. There was just a huge push, but it took about five years really for that to penetrate and take hold, and I think that's what we're seeing now with sustainability and resilience.

Paul Thies:

Well, on that topic of incentivizing behavioral change and action, I assume that companies, service providers are seeing greater sustainability requirements come through from their clients on project proposals. If so, have you found that to be a driver for authentic action on sustainability, or does it just tend to be a creator of more paperwork and reporting?

Hollie Schmidt:

Well, it really depends on the organization, but one thing I really see happening is that the financial markets have shifted, and they are really starting to embrace, and adopt, and understand the value of sustainable and resilient approaches and ways of behavior. Once that financial market starts shifting, then we've also got what's called a scope three in part of our ESG, which really looks at the upstream and the downstream behavior of your organization. What are your feedstocks, what are inbound to your organization? Who are those vendors that are providing it, and how do you green up that system? How

is your own operational footprint? And then what's happening downstream? What are you doing with your waste streams and your byproducts, and how are you distributing your products? And because of that holistic web, if you will, where your organization is in the center, but people that you touch on a daily basis are also getting those pressures, you're really seeing that penetrate I think much more holistically. Some companies and organizations are better at actually achieving action than others, but I see a systematic pressure across all of the markets. And some are more early adopters, some are later adopters, but they're all being pulled into that space.

Paul Thies:

So you talked in a piece you authored earlier this year, and I'll jump to the punchline, but then I'm going to ask the question. But you talk about this concept, return on perception, and I like the poetry of it. But you authored this piece, and it was on developing resilient and sustainable infrastructure. And you wrote, "We need to expand the focus from solely return on investment to include return on perception." Can you unpack for us what is return on perception, and why is it important?

Hollie Schmidt:

Well, historically, and I've worked across many large clients, they make their decisions on first cost. What is the first cost of this solution and this action? What's the first cost of the build? How do we get that return on investment and that first cost as low as possible and as profitable as possible, and get that return quickly? But there's a huge return on perception that is harder to monetize and put a financial value on, and those are things like health and wellness, worker welfare issues, retention and attraction ability. What does the public think of your brand when they see your developments and your footprint on our planet?

And so those have value, and we work with a company called Symetrica that Jacobs is involved in, and I work across my technical teams and say, how do we measure the things that are non-financial, and how do we start to talk about how there is that non-financial value in that return on perception? So if you have a development and the public sees solar panels on top of the parking garage, there's going to be a positive perception there. Yes, you're doing green energy and renewable energy, but the public sees that. When you walk into a lobby of an organization and you see plants and a color palette that's warm and inviting, you have a feeling about that. You have a perception on that company that really impacts your behavior.

And so we encourage what we call the triple bottom line, which is profit, clearly we're out to help for Jacobs to be profitable and for our clients to be profitable, but there's also people and planet. And we really want to achieve all of that trifecta of those three items, both in the perception and return on investment, and non-financial return on investment. So there's a lot more scientific ways now to measure those intangible items that we're really paying attention to.

Paul Thies:

Now, let's go back to the dense clay layer that you talked about. That kind of, "We've always done it this way" kind of mentality. And one of the blockers is human behavior and human perspective on how to do things, and that necessitates change management. So what are some change management best practices that organizations can take to get their teams to really embrace sustainability and resiliency efforts and bring those to life?

Hollie Schmidt:

Well, most of them that are highly effective are in the pre-design or pre-project stage. And so having an organization to start to make their public commitments, their performance standards, their key performance indicators that they're working towards, so Jacobs has a net-zero by 2040 goal of how we operate as an organization, looking at design guidelines, and technical guidelines, and RFP language that goes out to contractors or vendors. All of that can be baked into those pre-project, pre-design guidance so that it makes it into the budget, because what we find is that highly resilient and sustainable solutions do cost more typically. Normally we see about a 5-15% increase in the CapEx of the project. But when you do a lifecycle cost analysis, not just a first cost, when you look at the whole entire lifespan and the efficiencies and the hardening that you get from being more sustainable and resilient, has a huge compelling business case. The payoff is good, the risk avoidance is greater, your overall operations and maintenance, OpEx costs are much, much lower. And then you can combine those nonfinancial benefits that we were talking about earlier, and that really helps move the needle.

And I've been involved in projects and programs where we've been able to influence that space. So we did a rebuild for Tyndall Air Force Base on the panhandle of Florida after Hurricane Michael, and we modified all of that pre-design guidance. So when the design packages went out for 35% design all the way to 100% design, all that was baked in, and the budgets were there to accommodate that gross up of the OpEx. And so it can be done, and I've done it where the budget's in place, the project's in design, and we go in and we do an overlay analysis to say, with the current budget, what can we do? Or with an increase of 2%, 5%, what can we do? And we're able to change that design.

There was just an article that came out there from Jacobs talking about the Jacobs relationship with Fujifilm and the biopharma manufacturing facility they're doing in the Carolinas, and I helped lead the team to do a sustainability overlay for that project. And we were able to move the project into a lead, bold campus compared to the design to code that it was in before. And so here they are building this beautiful facility that's much more sustainable and resilient than it was initially envisioned by the client, and the client had come to us and said, "We need to change what we're doing right now." And so we mobilized and came in and really changed that. So there has to be a genuine appetite on the client side, and a genuine appetite and desire on our side to be those change managers.

Paul Thies:

Interesting. Now this next question, I had heard this, it was kind of a little soundbite, but it was something I thought was fascinating that Jacobs had worked on, and so I'll give you an opportunity here to brag on this. But the question is, can you share some examples where companies are taking creative and tangible action to address sustainability challenges? And the example I'm citing is, I understand Jacobs is working with a premium tequila manufacturer, Patron, to turn agave byproduct into cardboard to solve their supply chain issues, so that sounds really fascinating. So can you tell us a little bit about how companies are taking these creative steps to address sustainability challenges?

Hollie Schmidt:

Sure, and I absolutely love to talk about the Patron project. They're a great client, an amazing facility. They're owned by the Bacardi Corporation, and we've done work for Bacardi in the past. So we did a holistic and comprehensive master plan for all of the Patron enterprise in Central Mexico, and as part of that, we looked at their supply chain and where their risks were and how the pandemic really impacted their supply chain and where those pain points were, and one of them was in cardboard. So they were getting pinched on their supply chain, and so at times that would really disrupt their operations and being able to ship out their product.

Then we looked at their immediate operational footprint and how they were actually manufacturing tequila. As you mentioned, agave is their main sugar source, and I've had the pleasure of seeing how their premium tequila is made. It's a beautiful process. And looking at their main waste stream, which was what was left of the agave, it's called bagasse, and it kind of looks like a coconut husk, right? They have lots and lots and lots of that. So we had our partners PA Consulting with us on that project, and when we identified the shortage of cardboard in their supply chain, the robust amount of waste stream with the bagasse, and what that bagasse could be, how you could create value for it, they called it a waste valorization study.

And PA is brilliant. They came up with, I think over 200 different options for using their waste streams and turning those waste into value, one of which is retreating the water so that you can use the water again, not necessarily for their products, but for other functions. And it was determined that there's a high likelihood that they can make cardboard out of this agave byproduct. So that still has to go into the R&D phase, but the goal would be to attract a synergistic industry that could be co-located or located near the Patron manufacturing facilities, take that byproduct, make cardboard, and then provide that back to Patron.

And what that does is a couple things. It de-risks their supply chain for cardboard, it creates a circular economy, it reduces the cost of their cardboard because now they're providing the cardboard manufacturer with the feedstock, which is their byproduct. They have sustainability goals, which is to increase the recycled content in their cardboard, so this achieves that, and it also gets them to net-zero on that waste stream. Which they're already composting it, but now they are using it to provide additional value back to the company. So those are all of those types of connections that we want to make once we understand that client's full operational footprint.

Paul Thies:

No, that's wonderful. And the concept of the circular economy is just so cool, how you're able to create a self-sustaining model just by being creative and attacking the problem in a different way.

Hollie Schmidt:

One other thing I'll just mention is it also helps them decarbonize their supply chain. So we're no longer trucking all of this cardboard back and forth, so we are decreasing those emissions as part of that solution as well.

Paul Thies:

No, that's fantastic. Now, it seems like everywhere you turn, companies are touting their sustainability efforts. Of course there's a lot of interest, but are some industries better outfitted to make significant improvements in sustainability endeavors?

Hollie Schmidt:

That's a great question, and I'm so excited, and part of what I love about my job at Jacobs is I get to work across all of the markets. So our infrastructure group, our federal and environmental solutions group, our advanced facilities group, across all lines of business, all geographies in the Americas, and I work with some of our international groups as well. And so I really have had the privilege of understanding that cross market comparison in this space. So I've been in this job for about two and a half years, and clearly the corporate, commercial, private markets are at the head of the game. They are the most progressive. They have the most flexibility, I think, to reallocate funds, to do R&D, to really understand that brand enhancement connection between being sustainable and resilient using smart technologies,

being savvy business people. And so Patron is a great example of that. They're a privately held corporation. But we're doing work for Microsoft and for other large scale corporate clients that are really very genuinely intent on moving that needle.

But I also work with the Department of Defense, and we're doing a big program right now with the DoD called Engineering With Nature, where we're looking at what are these natural disasters that are threatening the mission assurance of our Department of Defense installations, and how can we use nature-based solutions to resolve those? I was just in Hawaii all last week. That's a tough gig, but I suffered through it. And we were in Kauai looking at a naval installation, and severe erosion at the top of a ridge where a lot of sensitive equipment is being located, and how can we fix that through nature-based solutions versus walls and concrete and pipes?

And so we're seeing a lot of legislation and mandates and recommendations coming out of the federal government, and incentivizing both federal and non-federal entities to be more sustainable and resilient and to be aware that climate change is real. And it's my personal belief that we shouldn't politicize this topic. There's science and there's engineering, and Jacobs is the number one ranked engineering firm in the world. We work with brilliant people that study modeling and predictive analyses, and all of these things that we really want to be aware of.

But then I look at the transportation market, and we've got statewide departments of transportations or DOTs, coming out with climate analyses and vulnerability assessments. I've been working with the rail industry and our rail market, and they're looking at how can they combat landslides and washouts by developing better along their linear infrastructure corridors? How can they look at enhancing their sit yards and decarbonizing? We've been working with transit companies, and Jacobs delivered a project where for the New Jersey Transit Authority after Katrina they went down because of lack of power. And so now we helped broker a deal between a solar developer and providing backup for that transit system. So whether it's airports, and particularly water-based ports who are getting flooded, they're all really seeing the fact that they need to introduce solar, they need to introduce the redundancy in power and water. So that's not just a sustainability issue, it's also a resilience issue.

And really, how do we flip on its head the problem and say, "This is how we've done it in the past, but this is how that infrastructure has fared." We've all seen the state of the infrastructure in the United States. I think we're at about a C- according to the American Society of Civil Engineers. So how do we do it differently so that we are more sustainable and resilient moving forward? And most of the clients that I'm dealing with are asking about it. We just had a mining client come to us and say, "We're expanding and we want to be a 10 out of 10 from a sustainability perspective," which I've never had a mining client say that. So it was very refreshing that they want to be at the forefront of their market. It's really penetrating into all the markets that we touched, some just a little more aggressively than others.

Paul Thies:

Oh, that's fantastic. So my last question for you, any final thoughts on what companies can do better to turn ambition into action when it comes to their sustainability and resilience programs?

Hollie Schmidt:

They need to fund it. Just like funding projects need additional budgets, companies need additional budgets to change that pre-project, pre-design space. Jacobs has set up a corporate office of sustainability that's led by Jan Walstrom who just won the Sustainability Leader of the Year award from Environmental Analyst. And so making that organizational structural change, do you have a chief resilience officer, a chief sustainability officer, a corporate sustainability and resilience office? I sit as a global solutions director for sustainability, resilience and climate response for the Americas, and I have

three counterparts. And so we're really looking at how do we liaison with corporate to make sure our commitments really are, we have that implementation strategy in place. Is it feasible? Can we actually achieve those metrics that are out there?

And it's also empowering the people who are passionate about it internally. So Jacobs has a lot of communities of practice around decarbonization, nature-based solutions, green and sustainable buildings, net-zero nature positive. You start to break down, what are the components of sustainability, and the components of resilience, and getting those people who are passionate about it in that space, I think it's impacting your sales organization. If you do have a sales organization, Jacob sees that as a differentiator and a win strategy. So how do I go and talk to our client account managers and understand what their clients may need in this space? But at the end of the day, you have to have budget and funding that's behind it. I know Jacobs just backed a \$500 million green bond, and that's going to help us with our decarbonization strategy for our corporate footprint with some of our diversification and inclusion KPIs. Green lending has better terms. So if you can demonstrate that you're going to be more sustainable in your actions, you can get better lending terms, you can get lower interest rates, and that many times can offset the increase in your CapEx.

I also work with a group I'm calling Financial Solutions, and they're looking at how do you get grants? What's the legislation that's coming down that you can qualify for? How can you attract private equity and public/private partnerships? And then looking at all of the funding streams and how do you do that financial strategy to really set that project up for success? And just working with some brilliant economists that we have at Jacobs that do that kind of work, because lots of times our clients know they need to be more sustainable and resilient. They don't know what the project definition is, and they don't know how to fund it and implement it. So we can come in that space, and help them with the project definition, the strategy, the funding, financing and implementation roadmap, and then that really helps, again, bridge that gap between ambition and action.

And then I guess in closing, what I would say is that understanding that there's an ego-based approach to development, and there's an eco-based approach to development, and my background is as a landscape architect. So we were taught to design with nature, to design with the land. And we can do anything we want. We can build a city on Mars, eventually. But I think if we can all realize what would be the most, lightest touch that we could have in our environment? How do we redevelop instead of greenfield development? How do we let eco lead us in our solutions and understanding the value of nature as infrastructure? For stormwater management, for coastal resilience, for recharging our aquifers, for the ecosystem services of cleaner air, cleaner water, shade that helps reduce the heat islanding effect.

There are so many benefits to incorporating nature into what we're doing. Into our cities, into our conservation areas, and driving how we develop. And I was talking to a friend of mine and I told him, "Oh, I'm out to save the planet," And he said, "Hollie, the planet's going to survive. It's humanity that we have to save." And so really, how do we tackle that? It's a big, huge topic. But Jacobs is not only in a position to impact the way that we operate as an enterprise, but the impact that we have by helping our clients be more sustainable and resilient in their solutions is massive. Billions and billions of dollars worth of projects that we touch. So if we can transform as a company and deliver all of that to our clients and bake it into every solution, that starts to really move the needle, and that's what gets me really excited about what I do.

Paul Thies:

Well, Hollie, thank you so much for sitting down with me and walking through sustainability and resilience, and giving us some perspectives on how to turn ambition into action. I think at the risk of

being cheeky, a key takeaway that I had is, you've got to put your money where your mouth is. So I really appreciate you sharing with us some of the exciting things that are going on at Jacobs and what they're doing, and thank you so much for your time today.

Hollie Schmidt:

Absolutely. I love doing it. Thanks so much.