Episode 2
Transforming Brownfields: From Liability to Opportunity

Narrator: Welcome to *Ground Breaking: Where Consulting Meets Innovation*.

Jad Sobh: Welcome back to *Ground Breaking: Where Consulting Meets Innovation*. My name is Jad (pronounced jahd) Sobh (pronounced SOO-buh).

Peter Nabhan: And I'm Peter (pronounced PEE-ter) Nabhan (pronounced Nuh-bon). And for those of you who are unfamiliar with us, Jad and I work for an engineering consulting company called ECS and Ground Breaking is actually our new podcast that's geared towards the architecture, engineering and construction industry, which for short, we call the AEC industry. Our goal for this podcast is to bring on thought leaders within the space to share experiences and knowledge with everyone.

Jad Sobh: Today, we are talking about brownfields and how their redevelopment has become relevant to our communities. But first, let's give a quick introduction to all of our thought leaders today.

Today, we have Jason Beck. Jason is a principal geologist for ECS, specializing in environmental subsurface characterizations and remediation projects, including large-scale petroleum investigations and brownfield site assessments. He is a professional geologist (PG) and West Virginia-licensed remediation specialist with extensive experience managing complex environmental site characterizations and remediation system designs.

Jason, thanks for being on today. Appreciate it.

Jason Beck: Yeah.

Jad Sobh: We also have our guests, George Carrico and Carrie Staton. George has been the environmental manager at Marshall University Center for Environmental, Geotechnical and Applied Sciences since 1996. He leads research and development, environmental management, energy development and flood recovery.

He's also served as a project manager since 2005 and director since 2013 of the West Virginia Brownfield Assistance Center, focusing on the redevelopment of brownfield properties across West Virginia.

Carrie Staton is the director of the Northern West Virginia Brownfields Assistance Center at West Virginia University and a coordinating lead for Mid-Atlantic Technical Assistance to Brownfields (TAB) program. TAB provides strategic direction for the center's programs and partnerships.

She has published research on brownfield redevelopment and presented at national and international conferences holding degrees in nonprofit administration from Bethany College and public administration from West Virginia University. George and Carrie, thank you for being with us today. Welcome to Ground Breaking.

So last but certainly not least, we have Chuck Whipple. Chuck is the ECS vice president and director of business development and brings 43 years of experience in economic development and finance. Having held key roles such as chairman of the Southern Economic Development Council and an advisory member to the US Department of Commerce on foreign direct investment. He also serves as adjunct faculty at the University of Oklahoma's Economic Development Institute (OU EDI), contributing to the education of industry professionals. Chuck, thanks for being here as another one of our ECS representatives today.

Chuck Whipple: Thank you for having me.

Jad Sobh: Absolutely.

Peter Nabhan: Yeah, happy to have everyone today. Today, we're talking about brownfields, so I really want to start with the basics and explain to our listeners. I'm going to start with you, Jason. Are you able to explain to us, in simple terms, what a brownfield is?

Jason Beck: Yeah, sure, Peter. Basically, a brownfield is any property where the redevelopment of that site is challenged by the presence of contamination, either in the form of subsurface contamination, asbestos, or something similar. A lot of people will ask, "What's a brownfield?" Pretty much any property that's ever been touched by human hands has the potential to be a brownfield because you can have contamination of all different sorts.

It really hinders the redevelopment of the property. You can find brownfields in small communities across the US and you can find them in big cities. It's a mixed bag of different types of properties. You can have a church that was a brownfield due to an oil release or asbestos, or you can have a former school.

We all know gas stations are big polluters, as are dry cleaners and things of that nature, but there's a multitude of different types of sites that are brownfields.

Peter Nabhan: That's a lot of places we have brownfields. I appreciate you sharing that simple explanation. I really want to hear from Carrie and George. How do you define a brownfield in simple terms? Obviously, I want to hear from Chuck afterward.

George Carico: Well, everything Jason just said is correct. I would add that you also have the perceived contamination factor as well. It may or may not be a project or site with any contamination. Just the fact that it could be there makes it a brownfield.

We also have those unknown sites. People just don't know what used to be there. So, now you have that factor. Until you can figure it out, those are defined as brownfields. And yes, they can be located everywhere, as he said. All across rural Appalachia, we've got them there, too. I say “If man has spent any time on a site. It's potentially a brownfield.”

Jason Beck: I learned from the best; what can I say?

Carrie Staton: That's great. I think the only thing I would add is that they can be, as we're saying, all these things, which means they can be as tiny as a little gas station that's a quarter of an acre or as big as thousands of acres of abandoned mine land. So there is a range of things; they are everywhere and complex every time.

Peter Nabhan: So a brownfield could be the property next to your townhouse, for example.

Peter Nabhan: Chuck, what do you think?

Chuck Whipple: I mean, from an economic development perspective, typically, there is some sort of recognized source that would have identified a site or property as a brownfield. That's the first notice that there may be an issue with the site.

Jad Sobh: Yeah, I guess it's one of those things that you never really think about. You see those abandoned properties in so many different places, whether it's a big city or small city. You'd never really think that there could be something impacting it and that's why it's likely just there.

Now, let’s turn it over to Carrie and George again. What are some of the health risks associated with brownfields? One of the things that got brought up was that it could have been a former gas station. What health risks should people be aware of when dealing with these properties?

George Carico: Well, I'll start with a couple of them. Carrie can add a few more. When you're talking about buildings that are going to get rehabilitated, the biggest factors are asbestos, lead-based paint and mold issues.

All those have significant health factors associated with asbestos. Asbestos, lead paint (especially with children), mold and allergy sufferers like me can cause a lot of alarm. And then across the board, like on the petrol side with gas stations and bulk plants, many of those compounds that you find, like benzene, are carcinogenic.

And then all the other things you have out there, many are carcinogenic. Altogether, it's just that whole hodgepodge of health issues that are potentially associated with brownfields that could be right next door to where someone is living or running a business.

George Carico: Carrie, do you want to add anything?

Carrie Staton: Yeah, I think that's right. I think it certainly depends on the kind of contamination, but there are different kinds of cancer. I think the other concern around that is that these tend to be located in places that have higher concentrations of vulnerable populations—young kids and the elderly, for example—so there's a higher, more significant threat. They're already susceptible to those in other ways, which makes it a big concern.

George Carico: That's why conducting that phase I environmental site assessment is so important. I promise you that the day I retire, that will be my farewell speech. You better get a phase I done first. Carrie actually had shirts made up that say, "Have you had a phase I done?" We really stress that a great deal with everybody that we work with.

Jad Sobh: There are a lot of things obviously now, here in this list of what could potentially be harmful to anybody that could be near it. What are some of the most common solutions for brownfields? What does that process look like? Is there a specific, one-size-fits-all remedy for everything?

Carrie Staton: Yeah, I think I'll start just more generally, because I'm not the environmental scientist. The first answer is that there isn't a one-size-fits-all. But what's important is that it's about risk. It's risk-based. At the beginning, before there were the regulations that we have now, it was just impossible to know how clean it needed to be and financially infeasible to remove all of the contamination of the site.

So since then, risk-based cleanup standards have been established. It depends on how much time you're spending there. We're talking about these health issues and there might be a brownfield next door. The reason not to be scared is that it doesn't mean that if you're living next door to a brownfield at this moment, you are currently being actively exposed. It's about how much time you're spending on that site. So if it's going to be residential, or you're going to be there for a long time, there may be one strategy. If it's going to go to another industrial use and people aren't going to be on there as much, it's going to be a different strategy. I think that's a really important piece.

Jason Beck: I'll add something to that really fast. There's no one-size-fits-all for a brownfield. It really is dependent on what the current use is and what the future intended use of the property is. Then you can mitigate the risk accordingly around it. Brownfields shouldn't scare people off. You can clean up. There have been radioactive brownfield sites where there have been buildings built on top of them. As long as you engineer and mitigate around it, you can do that. There are effective remedies for everything.

George Carico: I would add that, like here in West Virginia with our state program and in many other states, you have these voluntary programs—voluntary remediation programs—that are set up and they do the exact same thing. What's the future intent of that site? What's it going to be used for? Is it recreational, residential, or commercial?

Then you backtrack on that to determine how much cleanup needs to be done to make it safe for that future use.

Peter Nabhan: Good deal. Excellent. I'll take what you said and I heard the terms "cleanup" and "remediation." Jason, you mentioned that you can even put a building on top of it. For the experts on the call, would you mind walking us through some of the common techniques you've used in the past to remediate some of these sites?

Jason Beck: So, it largely depends on the type of contaminants. We're living in the age of emerging contaminants right now, where we have trigger words like PFAS, GenX chemicals and things of that nature. We're learning that the EPA is putting out new regulations associated with them daily, so you have to take all that into consideration on these historic sites as well because it's changing the game on the remediation approach.

Often, if it's volatile organic compounds or something of that nature, you simply put a vapor barrier beneath the building with your standard home radon system, which may be beefed up a little bit. You'll have a passive and an active vapor mitigation system to protect the inhabitants of the buildings—the future residents or commercial workers, or what have you.

Sometimes it's that; sometimes the remediation is as simple as just moving soil from one side of the property to the other and putting a cap and berm in place. So, it really does vary. But George brought up a really good point about the state voluntary program. If you have a more complicated site that warrants a little additional regulatory oversight, you can enroll in the voluntary program. They can help guide your environmental professional and work with your environmental team to get the site to a safe and healthy reuse.

George Carico: I was just going to add that it goes back to the previous question we were talking about—about that future site usage. Once you know what you plan to put on the site, it may be a matter of simply adjusting some of your site features.

Putting the parking lot on the east end of the property instead of the west end, if it'll fit. That parking lot is a cap, but the public sees it as a parking lot, so it serves that purpose. And then, as Jason said, sometimes you can manage these things in place with certain mitigation tactics. Sometimes you do have to do a little dig-and-haul or asbestos abatement or encapsulate some lead paint and some of those kinds of things. So, it is site-specific. There's never a one-size-fits-all in the brownfields arena.

Peter Nabhan: Absolutely. So, I heard there are a lot of ways we can mitigate the existence of these brownfields through either proper design, encapsulation, or maybe moving dirt from one side of the site to another. So, we do have some options at our disposal. But while you're doing implementation, I started thinking about what risks you've seen.

Jason Beck: We've seen some pretty crazy stuff. I've seen brownfields where we started digging and found underground storage tanks full of what were called Stoddard solvents. Stoddard solvents haven't been used since the turn of the century and the tanks were still full. We had straight hazardous soil down to 35 feet below ground. I spent more time at that job site than I care to admit. It was rough, but they're not all like that.

George Carico: You can have small sites with very unique problems that are really hard to address. One example: I was asked to stop at a house and talk to the owners. I found out that, back in the 1940s and 1950s, it had been a tiny gas station. The property was sold and someone came in, added to the small building in various directions and made a house out of it. It was a pretty nice house.

I went inside their house, into a closet and they opened a little floor panel, showing me a fill spout for an underground storage tank under the house. That had to be left in place, so we had people come in, cut a hole in the tank, degas it, clean it and fill it with concrete slurry. That was inside a residence. You never know what you might get into in the brownfields arena.

Jad Sobh: Yeah, you can see anything, it sounds like. There's always time invested in these projects and also the money as well. But you do hear about the upsides that come from these projects.

So, Chuck, I'm going to throw it over to you for this one. How does the redevelopment of brownfields in local communities really affect those communities and their economy?

Chuck Whipple: Redevelopment of brownfield sites accomplishes several things. One is that it can increase the property value of sites adjacent to a brownfield or near a rehabilitated site by 10%, 12%, or 15%, perhaps more, depending on the location.

Another benefit is the higher tax revenue due to the reassessed value of a redeveloped site. Typically, if a site's contaminated, the assessed value is lowered because the building may not be in use or because of the risk associated with the development. Once it's cleaned up and redeveloped, though, the local community has the opportunity to reassess the facility at a normal rate, which provides additional revenue they can use across the board.

Additionally, job loss in a community that has a brownfield building from an industrial perspective is a big concern. When a site is contaminated or closed, those jobs are lost. To create an advantage for a community, the facility has to be rehabilitated. As Jason mentioned, specialists are needed to rehabilitate most of these structures, so jobs are created as a result.

Once the redevelopment occurs, the long-term, sustainable jobs associated with that development create opportunities for the people who live, work and play in that

community. Lastly, blighted, abandoned structures often make a community seem unsafe. Abandoned buildings are targets for vandals looking to strip out commodities like copper. Redeveloping these structures removes the stigma that the area fosters criminal activity, making communities feel safer.

Jad Sobh: So they can be massively beneficial ultimately, which is just great to hear. It can really help revitalize a community that might have issues, like with lots of brownfields. So it's good to hear.

Carrie Staton: In addition to those economic benefits, which are crucial and the environmental benefits we've talked about, I think reusing these sites helps combat urban sprawl. So you're not continuing to grow outward. It can help preserve green space. In a place like West Virginia, it might be the only option for development, where our topography really limits the number of developable sites. So, there's a real benefit to that and to attracting industry to sites that already have infrastructure in place.

There was a factory there for 85 years. Now it's time for something else. In addition to reducing the stigma, there's increased pride in the community and improved visibility and quality of life.

Jad Sobh: Getting into it then, Chuck, Carrie, or whoever feels free to hop in, there can be two sides to every story. Is there any opposition to these types of projects? If so, what is it?

Chuck Whipple: We've seen instances where certain groups challenge the redevelopment of a brownfields site because they're concerned that it could unearth volatile organic compounds associated with the project, creating a health hazard or environmental threat. So we've had groups approach us with those concerns when we're looking to rehabilitate sites or buildings.

Carrie Staton: Yeah and I think sometimes when these sites have sat vacant for 30 or 40 years, the myths and lore around what could be there can take on a life of their own. There can be an expectation that the contamination is much worse than it actually is. I've seen it and I'm sure George has too.

I've been in community meetings where people didn't believe the site had been tested more than any site is normally tested. They kept saying, "You didn't go far enough. You didn't test enough. It's dirty. I promise." And it was dirty, but it wasn't nearly as bad as anyone, including the Department of Environmental Protection, thought it would be. But the science is the science.

When you've spent 30 years thinking, "That's a terrible place, don't go there, it's dangerous," those things can be hard to overcome in that moment. And I'm sure George has had those meetings too.

George Carico: I would add that sometimes you run into issues with landowners and responsible party issues that can sometimes be problematic.

Jason Beck: I'll add in real quick. There's an aspect of a lot of these, too, in public engagement where people have expectations of what they want the property to be and what they want it to become. Those expectations also go against each other sometimes. It almost hinders communities because they can't come to an agreement on what that property should be. I think that's a challenge and it's just part of hearing out the community and working with all the stakeholders to figure out the best intended reuse of the property.

Peter Nabhan: That's a good point, Jason. I like the fact that you mentioned community because, ultimately, perception is reality. To your point, Carrie, people think this is a much dirtier site than it actually is. So no, that's a very good point. At the end of the day, it's a human decision to be made. We can do all the science and engineering, but ultimately it's human beings making decisions and you have to manage that as well.

So, I want to shift the conversation to a project that was a brownfield, a highly contaminated site that you were able to successfully remediate and had a positive impact on the community. If there's a project that comes to mind, I'd love to hear from you.

George Carico: I could spend the next couple of hours talking about successful projects Carrie and I had the pleasure of working on. For example, one fire station in Huntington, West Virginia, is brand new and state-of-the-art. It was a former dry cleaner and gas station, both with significant issues. Now it's a fire station in a community that didn’t have one, so it's in the perfect location.

Marshall University also has a brand-new baseball field that opened this spring, which is on a former part of a brownfield site. That’s just a couple of many, many, many projects we could mention.

Jad Sobh: Very nice.

Chuck Whipple: There have been a couple I’ve been involved with that are worth highlighting. One was in Greensboro, Georgia. It was a cotton mill in a community of 4,000. It was a brownfield site and they went in and created loft apartments for low-income families whose income was $30,000 or less. So it satisfied a need in that community and brought a facility back online.

Another was a historic courthouse in Lexington, Kentucky. The facility dated back to the 1800s and early 1900s. It operated as a courthouse until 2002 and a museum until 2012 when they found hazardous materials and asbestos, so it closed. The community wanted the building to be back online because it was the central focus of the downtown area. The building was 50,000 sf and now has restaurants, a tourism center, office

space and event space. People are now congregating again in downtown Lexington as a result of that redevelopment.

The poster child, in my opinion and Carrie and the folks from West Virginia can probably speak to this better than I can, is a mile-and-a-half corridor between Ransom and Charleston, West Virginia. It had dilapidated manufacturing buildings and contaminated properties. The leadership of both towns came together and said, “We want to solve this.” Over the last 10 years, as I understand it, academia, a civic center and other buildings now operate in that corridor. About $50 million has been spent across the corridor and 500 jobs have been created in that tiny corner of West Virginia, which is a really cool story. There are dozens of other stories of the EPA providing funds over the years to rehabilitate sites across the country.

Jad Sobh: That's great stuff. It's funny you bring up the EPA because that's where a lot of this information is coming from. We've heard about a wide range of possibilities. When it comes to time and money, on one end, it can be expensive, but we've also heard about grants that assist with these types of projects. Where can you find more information about those grants and apply? Is it all handled through the EPA, or are there state, local and federal options? How does it all work?

Carrie Staton: There are a lot of resources available through the EPA on the environmental side. There’s funding that allows people to apply directly for money related to assessment and planning work, which is interesting because EPA funding can be used for planning activities like market feasibility and site analysis, not just traditional environmental work. Traditional environmental site assessments can also be funded by EPA grants.

Additionally, the EPA can directly send out contractors to do work for communities or nonprofits that may not have the capacity to apply for a grant. There’s also funding for remediation, but not everyone is eligible to apply for that money—grants are typically targeted to nonprofit organizations, public entities and quasi-governmental organizations.

One of the reasons the centers were started was to help low-capacity communities in West Virginia access this money more effectively. The TAB program that I lead in this region—the Technical Assistance to Brownfields program—is funded by the EPA to help those communities learn about brownfields, understand the process and figure out the resources they need.

Those are the traditional resources. I’d also mention that several other federal agencies fund brownfield projects without necessarily realizing it. The EPA might handle cleanup, but the USDA might fund a community facility like a library built on the site, or the EPA could help finance an industrial site. So, resources come from many different directions.

Jason Beck: I'll add that there are state resources depending on which state you're in. Various states offer brownfield grants. For example, Virginia has a revolving loan fund for brownfields and West Virginia has state money available as well. You can reach out to your state's environmental regulatory bodies and they can point you toward their available state funds.

Chuck Whipple: I was going to add, there are four different programs that the EPA funds from a grant or finance perspective. They have a multipurpose grant program and an assessment program. They fund revolving loan funds to assist with projects and they also have cleanup grants. To date, the EPA has leveraged probably close to $30 billion in cleanup and redevelopment dollars and created almost 150,000 jobs across the US It's a good resource for people looking to determine whether a building or site may be contaminated and they can help with the funding component as well.

Carrie Staton: We talked about the challenges and why brownfields are beneficial but also difficult. Brownfields can be more expensive and take longer, so those state, federal, or other funding sources can help incentivize their redevelopment as opposed to green spaces or other less complicated sites.

Chuck Whipple: The last thing I'll add is that if you are a tribal nation and have issues related to brownfields, the EPA has a noncompetitive program that targets tribal communities. It's available for them as well.

Jad Sobh: So there's plenty of public funding for these projects. There's the EPA and plenty of other government organizations that provide grants or funding. When it comes to the private sector, how do you make brownfields attractive to them to help get them into these communities to redevelop these sites?

Chuck Whipple: By leveraging the federal dollars. That's it.

Jad Sobh: Nice and easy.

Chuck Whipple: But it's highly competitive, I'll add.

Carrie Staton: Yes.

George Carico: I would add, though, that we have a lot of private developers who know, at the end of the day, they can make money off brownfields. There are many out there who see a brownfield and don't think, "Oh my gosh, this is going to cost us a lot extra." They say, "Oh no, nobody else wants these sites and we know we can get them redeveloped and be successful doing it."

I was just thinking of three projects right now near Marshall University. All of them started with $300,000, $400,000, or $500,000 in EPA grant assistance. Now, there are $30 million, $44 million and $51 million projects in the works. It all got started because

of that initial funding. Those private developers are behind it, knowing that, at the end of the day, it's going to be a successful, profitable project.

Chuck Whipple: Across the economic development space and the community, there's a lack of available sites and buildings. So these brownfield sites and buildings, while they may have some challenges, absolutely present opportunities for developers to take advantage of, given the limited resources currently in the marketplace.

Carrie Staton: Yeah and I think it gets a little more granular because it really depends on the site, where it is and what kind of site it is. There are other tax incentives that aren't brownfield-specific, but if it's a historic building, it may qualify for federal or state historic tax credits. There may be a TIF district—tax increment financing district—that would be eligible. There might be a New Market Tax Credit project that targets brownfields. They don't only focus on brownfields, but there are points for doing a brownfield project.

Many years ago, before I got into this work, there was a federal brownfield-specific tax incentive. There's a push from the National Brownfields Coalition to bring that back. I think it was more successful in urban environments. It didn't really help bridge the gap on these rural projects that George and I work on the most. But in some urban projects, it helped people get across the finish line to redevelop.

Jason Beck: One additional thing related to that is energy-related projects are really hot right now. The IRS has new brownfield-related energy project credits. Solar industry, wind farms and things of that nature can move in on a brownfield site and get significant tax help. They won't have to pay the same tax level they would if they were going into a greenfield site, basically virgin land in that sense. So I think they work hand in hand.

Peter Nabhan: I've heard you mention a lot of the different stakeholders that are part of redeveloping a brownfield. You've had to collaborate with a lot of them. How would you describe some of the successes and challenges in working with these different stakeholders?

George Carico: I'll start by saying that when you're using EPA brownfield grant dollars, you have to have the community component on board in your application from the start. So, having community groups, along with state partners like our DEP here in West Virginia and federal partners, is equally important.

If you don't have them on board, you really don't have a project. You've got to have that community aspect. Also, from the private sector, you've got to make sure they're on board as well with many projects, but it goes back to every site being its own unique project. It's always going to be based on that and what you want to accomplish on that particular site.

Peter Nabhan: That's a fantastic point. Thank you, George, for sharing. And I do want to, I know, bring this more to a futuristic vision. It's 10 years from now. How do you see the future of brownfields evolving?

George Carico: I'll go first. I plan to be retired. However, people have been saying things like, wow, y'all been doing brownfields, so we're going to celebrate our 20th year in the Brownfields arena next year. And, oh, you've been doing this a long time. Have you run out of sites yet? I always respond with, we haven't even gotten started yet. There's so much more to do. But slowly but surely, people are realizing these properties have value and can be redeveloped for new use.

Chuck Whipple: I think that's the biggest issue when you first look at brownfield and superfund sites. They were black eyes and nobody wanted to touch them. They were a blight and an eyesore on the community. Now look at what's transformed since the EPA started providing funding for brownfields. They're more readily acceptable and developers are willing to take risks on them. I think they'll continue. As long as humans are involved with sites, things are going to happen. We're going to have sites that will be challenged and folks will find a way to repurpose them, for lack of a better word.

Peter Nabhan: Absolutely. We definitely live on a finite amount of space on Earth. So anything that has been used up and can be reused, we should definitely look into. Jason, how do you see the future? I want to hear from you.

Jason Beck: Yeah, I mean, I think this program's going to last a long time. I think we're going to continue to have brownfields and people will see the direct impact on communities, big or small. You're not going to find a more impactful program. If you walk into a dilapidated school that's been sitting there for 30 or 40 years unused, or a big industrial facility that gets converted into a senior housing facility or HUD development, something along those lines.

I mean, we're converting industrial sites into low-income housing. You know, it's been sitting. We have one site that's been sitting for over 50 years and hasn't been touched. All of a sudden, it's got life. It's got vibrancy back into it and it's feeding the community again because you see that industrial complex getting redeveloped. Then all the neighboring properties are suddenly starting to get redeveloped as well and the residences are being redone. So it's a direct impact. I can't think of another environmental program that has so much impact on the local community. When you have something like that, people want to see it keep happening. So, it's more or less bipartisan. Everyone loves it, so everyone keeps feeding it.

Carrie Staton: Yeah, I think that's a great point. I think I would share that optimism and I hope that federal and state investment stays at the level it has been in recent years. But I think the reason I share that optimism is because you're starting to see non-EPA agencies investing in brownfields and now being more aware that they are. CUNY facilities have always been doing it with the USDA, but now they're saying the word brownfields. Everybody is kind of getting more into the popular lexicon and George is

right. We're always making more, unfortunately. There are always going to be more brownfields and we still have to deal with all the ones before the new ones that are being made by new industries. So they're not going anywhere, but the opportunity that comes out of brownfields isn't going anywhere either.

Peter Nabhan: Excellent, it looks like we have a lot to be excited about. I guess you know, you wake up every morning and have a lot to do—George maybe for the next five years and everybody else for the next 10 or 20. I appreciate everything that you do and I learned a lot today about brownfields. I don't know about you, Jad. How do you feel?

Jad Sobh: Yep, a lot more. I mean, we hear about it all the time at work, right? It's such a big thing nowadays, but, you know, me being a humble marketing professional, I don't know everything. So being on a call like this is absolutely enlightening and I appreciate everybody for that.

Peter Nabhan: Absolutely. So we're close to the end, but I do want to finish us off with one question that we ask everybody who comes to our podcast. Are you okay answering that question? The question is, can you tell us something in your life that has been groundbreaking?

Jad Sobh: Personal or professional. So, Jason, you want to start us off?

Jason Beck: Oh, I'll start us off.

Peter Nabhan: I think I may know what you might share, Jason.

Jason Beck: Adopting a kid was groundbreaking—it completely changed our lives forever. So, that's mine.

Jad Sobh: Love it. Carrie, you're up next.

Carrie Staton: So mine is more professional, but when I started at the Brownfield Center in 2011, I was the only woman on our staff. Brownfields are kind of at the intersection of some very male-dominated fields. In 2017, in West Virginia, we started the Women in Brownfields, which is just a breakfast that we do at our conference every year.

At first, we just wanted to find the other women working in the field and then to share and build each other up. It's going strong. We have it every year. Pennsylvania started stealing it from us. The national conference started stealing it from us. So it's one of my favorite parts of the year and also something that I'm really proud of.

Jad Sobh: Great stuff.

Peter Nabhan: That's awesome. Thank you for sharing. Chuck?

Chuck Whipple: We referenced one of the federal programs earlier that's often used to facilitate the development of brownfields. In the early 1990s, I worked on a transaction that was one of the first of its kind in the US—the securitization of a Community Development Block Grant (CDBG) loan program.

We used CDBG funds to finance industries in the rural parts of South Carolina. We were a local intermediary and needed to raise additional dollars, so we securitized the existing portfolio we had at the time to raise money for additional transactions in CDBG-eligible communities. It was one of the first done in the country. Exciting times back then.

Jad Sobh: Awesome. George, last but certainly not least. I know you haven't quite hit retirement yet—because I know that will be groundbreaking for you—but what have you got, sir?

George Carico: I've got one a lot better than that. Actually, I'm getting ready to celebrate, here in the next couple of days, 35 years of marriage to my wife. She can't get rid of me if she wanted to.

Peter Nabhan: Congratulations. Congratulations.

Jad Sobh: Great stuff, guys. Once again, just thank you to all of you for being here with us today to share your knowledge on these topics and your perspectives. It was very enlightening for me and I'm sure our listeners will appreciate it as well.

So to wrap up here, you know, don't forget to subscribe on, Apple podcast, Spotify, wherever you get your, podcast, you know, thanks for listening to *Ground Breaking: Where Consulting Meets Innovation*.