

Infrastructure Investment and Jobs Act

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SPEAKERS

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Doug Parsons 00:00

Hi everyone this is America adapts the climate change podcast here. After welcome back to a very exciting episode we dig into the infrastructure investment and jobs act or IJA. As a catalyst for transformational adaptation, we're going to learn how the act is designed to fund adaptation and resilient projects across the country. The expert guests in this episode will share how you can strategically and collaboratively apply for these federal grants federal funds can be notoriously difficult to apply for the experts in this episode are in the thick of climate planning and they will offer specific advice on how your community or organization can apply for funding. Ditto mayor of the Brookings Institute talks about their infrastructure resource hub Shalini Valhalla of refocused partners returns to discuss how they are helping local communities be strategic in their adaptation, planning and finding practical approaches for grant applications. Then we hear from Brandon K of Tempe, Arizona and Tom Jacobs from the Kansas City region and how their communities are using their existing adaptation planning efforts to help them apply for these funds. And some bonus conversations we hear from Samantha Medlocke formerly the general counsel for the now sunsetted House Select Committee on the climate crisis and Chad Nelson from our neighbor up north infrastructure Canada. I'm very excited to share this episode with you this funding is a big deal. And if we do it right, the infrastructure act can lead to transformational adaptation. That's a big if but my guests will demonstrate that there are experts out there that recognize this once in a generation opportunity. This episode is being generously sponsored by the Genesee Mountain foundation. Thanks to support by sponsors like Genesee, I can share these amazing stories. Okay, let's join a de tomar of the Brookings Institute to kick off this infrastructure and adaptation episode. Hey, adapters joining me is a D tumhare. A D is a senior fellow at Brookings Metro and leads the Metropolitan infrastructure initiative at the Brookings Institution. Hi, Andy, welcome to the podcast. Thanks for having me, Doug. First off, just give us a little bit of background worldfamous institution the Brookings Institution for but for those people aren't familiar with it? Could you give us a little bit background?

Adie Tomer 02:11

Yeah, so the Brookings Institution is a now over 100 years old were quote unquote, the first think tank in the world. That's a pretty obnoxious title. Because you know, I don't know anyone who doesn't think on the job. But we're a policy research organization. So in many ways, we're like a university without students focused on trying to solve the most challenging public problems both here in the US and across the world.

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Doug Parsons 02:32

Okay, great. And so let's dig in a little bit further. What's the Brookings Metro program? Yeah, so

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Adie Tomer 02:36

folks asked this all the time. So we're kind of the city, suburban II and small town people inside the institution. So we tend to focus on all kinds of issues that impact place. So we're not the ones working on peace in the Middle East, or climate issues, and Asia Pacific. But we are the ones thinking about how can American communities large and small prosper now in the 21st century? So what's your role there? So what keeps you busy? Yeah, really busy. Again, the university without the students funny, you can get a lot of work done almost too much work. When you're not doing teaching, we cover all of the major infrastructure sectors on my group. So that's transportation, water, resources, broadband, and energy. And we also look at the components that go into it. So let's say workforce issues, which my colleague Joe Kane really leads thinking about fiscal issues. So that's both public funding private financing the usage patterns, which is something I really kind of take a lot of interest in. So we're thinking about all the dynamics within the infrastructure sector. And critically, you know, we're not civil engineers, we're really economists in urban planners. So think of us as the group that's trying to think about how does infrastructure connect to all the other drivers of economic growth, social prosperity, and environmental sustainability and resilience?

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Doug Parsons 03:47

Alright, so when I was doing research for this episode, looking into the infrastructure investment act, I came across your hub, can you tell us about the Brookings federal infrastructure hub? And we'll dig in a little bit here, but just broadly, what is it? Yeah, so

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Adie Tomer 04:00

for context, it's really been a banner year or two years almost at this point for infrastructure related news, all of a sudden, everyone understands how big of a role that frankly, the federal government can play in infrastructure issues. Traditionally, in Washington, we pass a series of different infrastructure bills, both for each sector and sometimes different bills within each sector. So to give you an example, surface transportation, meaning roads, transit, even railroads sometimes get their own bill, whereas aviation and shipping let's say specifically through reports, and the Army Corps of Engineers gets their own bills. What was unique in November of 2021, was that the infrastructure investment and jobs act, or aiija, or IJA, or the administration calls it the BI L or hypere and infrastructure law, only Washington would you

come up with this many acronyms, but it was incredibly unique to get this much activity all in one bill. So we combined transportation and energy issues and water resources all under one roof to top that off, Congress passed effectively its first modern broadband related piece of legislation, we really had an updated thing since 1996. So it was a ton of content, if you will, all in one place. And what we realized pretty quick was that even just for ourselves, if we were going to read this bill in full, which we always do, we might as well take the time to actually map the bill out, we both want to know what was in the bill in terms of the actual programming content or the policy. But we also want to know, the kind of first question people ask us included, which is, how much are we spending, what we did was we map the bill, program by program, it took, honestly months, and what we end up with is a hub that is available to the public that's searchable through an actual kind of visual charting interface. So it's a little bit easier than just typing words in if you're not sure what you're looking for, not to actually show how the bill works, how much is passed in it. And it kind of gives you a better sense of just what Congress did here.

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Doug Parsons 05:52

Okay, so this must have been a really interesting position, which is you guys pivot on your role? Because a lot of times, I mean, Brookings, you guys have been there in forming the government for decades, as you said, 100 years. And here's a situation where they actually came through and they passed a really significant bill, and there must have been a little bit of pivot, it's like, alright, we're no longer here trying to tell you what you should be doing. You did it. Now, what's our role in helping I guess the resource hub is a consequence of saying, Okay, now let's go since you've decided to take some of our policy advice, we're going to help out.

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Adie Tomer 06:23

Great question. There's been a constant approach in Washington for a decade plus, and I've been at this 15 years myself to kind of I say, lobby in an informal way, right to try to advocate on the Hill for, hey, let's do something big on infrastructure. This is really important to invest in America's built environment to make sure we're competitive in the future, you hear a ton of hackneyed examples here of, hey, the Erie Canal, which by the way, the federal government didn't even build, right, or the Transcontinental Railroad, which again, was mostly done by private railroads. But the commonality there is that investing in how America kind of physically works is such a critical component of how competitive we are on the global economic stage in during any kind of epoch, if you will. And it was really important for the federal government to finally do something, if you will, for the 21st century for the digital age. And of course, especially for your audience, right, Doug, for this kind of era of significant and clear climate crisis. Finally, the kind of word got through right, the situation lined up just right in terms of political interests among the two parties, of course, he was in the White House that a bill got over the finish line. But funnily enough, it's kind of once you finish a job like that the task really changes. And quickly, what was a primary focus of advocating for different legislative positions. And of course, the senators and less of the house kind of put forward what became the bill, but now it turns to implementation. And I really want to kind of emphasize for folks, we think of the federal government being a huge player here on infrastructure, but it's actually the minor investor, and transportation and water systems. And, of course, is really just a regulator primarily on the broadband and energy side, at least traditionally, in fact, from a public sector perspective, states and localities. So this is the place where you live, it's wherever your kind of

address is both the city name and then the state name. They're actually the primary investors in the built environment from a government perspective. So how this bill kind of filters through the system for the states and localities that will actually do most of the construction. That is a huge undertaking, what you're now seeing come out of not just Washington, but policy shops, both inside universities, standalone nonprofits, even within government itself, is trying to help states and localities best understand how to tap these new programs, the funding within them, and to make good on the promise of building a new kind of America. So exactly right. The way you ask the question, the our resource hub is just one way to really quickly navigate what's in the bill. There are shops, like let's say those funded by Bloomberg, philanthropies and run out of Results For America and National League of Cities trying to help cities understand how to actually apply for competitive grants, national associations, especially those representing states like the National Governors Association, there's multiple transportation groups focused on states, they're trying to help their members at the state level understand the changes in the law. So there's this whole machinery that's now standing up to make sure that we make good on effectively what Congress promised to spend. Right. So it's kind of I like to think of as like parents and children in a way, metaphorically, right. So the parents said, Okay, here's some allowance, you know, a little bit more than you're used to, but spend it wisely. And now it's up to the kids to make good on that.

D Doug Parsons 09:26

So you've alluded to it in your answer, there's somewhat but who's this resource hub created for

A Adie Tomer 09:30

ya so that the resource hub itself is ideally suited for a suite of different actors. So for folks, let's say in the media, or in just the general information collection side, we want to make it as easy as possible for those folks to understand what's in the bill quickly, but also kind of have a full scope of how to compare different sectors of the bill write for actual practitioners at the state and local level. This is useful for them to get a sense of both where the bill made big investments, help them understand how it can relate to There are long range plans. And as the bill continues to mature, and more and more programs start to issue, let's say calls for applications. This is the place where we can put that information to so and that's going to be especially useful for practitioners going forward,

D Doug Parsons 10:12

I'd like to really describe literally how people can take advantage of these resources. So let's say you're a local government person, or you're an NGO that partners with local government, and they come to this resource sub, they come to your homepage, what would be just a good way for them to get started? And of course, you can't go down all the way into the weeds. But in that scenario, what would you say? Yeah, so

A Adie Tomer 10:32

there's really kind of two users use cases we're thinking about the first is someone who's just

there's really kind of two users use cases we're thinking about the first is someone who's just like, What is even in this bill. And what you'll find at the top of the page is a color coded tree chart that is actually interactive, and allows you to dance around, if you will, and see what's actually in the bill. So maybe you read about a big new program. Now you can see exactly how big that is, and maybe find out about other programs that are similar, whether it's under building bridges or watershed restoration, let's say. So that's on one side. The second is, for folks who who have an idea of what they want to invest in at the local level or the state level, this is a quick way to understand how many programs there might be under your topic areas of interest. So rather than already at the step of wanting to apply for grants, this is really a place to kind of help folks kind of learn. So maybe the way I should frame it's almost like a kind of sounds wonky. It's almost like an encyclopedia. So rather than exactly what to do, it kind of gives you all the different examples of what's happening in the bill at once.

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Doug Parsons 11:28

I'm curious because the inflation Reduction Act came out after the infrastructure act, and how did that influence what you're doing here with this resource? Because it's my understanding, there's actually quite a bit of overlap with words investing and resilience and adaptation issues and just even infrastructure, how does that come into play? Yeah,

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Adie Tomer 11:46

it's a great question. So the short answer is, we have done the exact same back end work for the inflation Reduction Act, too. So we are getting ready to update the federal infrastructure hub, it'll be happening in the next couple of months to include both inflation Reduction Act information. So that same kind of encyclopedic approach, if you will, to what's going on, then you'll be able to do that for ij. Now, you'll be able to do that for the IRA, as well. And there is a ton of overlap. So we've used the exact same categorization scheme to help folks understand what the IJ did, and what the IRA did, and just how big the package is. And for what it's worth, for everyone listening, we're our new total is about \$1.25 trillion in committed spending from the federal government here on on all these various sectors that the two bills cover that could loosely qualify as infrastructure, natural and built environment, let's say so it's a ton of money. That's the one part. The second is now that the IGA money is starting to move out the door. And there is a certain level of tracking happening by the White House, we're going to start reporting out on what kinds of projects are getting funded. So we can ideally offer a one stop shop to see what has been awarded. And through that to get a sense, especially for again, practitioners, other researchers, for what the federal government seems to be rewarding through these competitive applications processes.

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Doug Parsons 13:04

Okay. Well, my next question is like, you're going to create a database of actual projects that are funded, and apparently you are so there you go. That's sort of what you just described there, right?

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Adie Tomer 13:12

Yeah, that's exactly right. Yeah, we'll have a database of the projects, again, huge code to the White House. And for other folks are interested, you can go to build.gov. It's a little wonky, to find the exact link, but you will find I'm not sure if it's a CSV file or an Excel file, you can find the full project list, what we've done is actually mapped on to our categorization scheme. So we can connect the stuff that you can chart and again in that like encyclopedia, searchable, visual approach to actually see where those awards are going across the

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Doug Parsons 13:39

country. All right, you know how it is. Sometimes they say you build it, and they will come. And that's not always the case. People are going to be finding this for years to come. And it takes time to do this. Or do you guys there Brookings? Do you host webinars, you have any events? It's, I guess, you're constantly reminding and maybe helping people that will randomly come to this resource?

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Adie Tomer 13:56

Yeah. So the good part is we are committed to managing the website, you know, now that it's posted live, as long as we kind of keep the lights on our own website, this resource will be live. And that's part of why we did it that way, Doug, was that we really wanted to make sure that was evergreen to use immediate term, right? So you can always go do this, right, the bill itself won't change at this point. So we'll be able to both see what it looks like. And ideally, you know, as these projects move forward over five years for ij and 10 years for IRA, hopefully, we can continue to update that kind of project level database. So folks will always, you know, directly decades in the future have an ability to track exactly what happened here. You know, when you go back and try to look for American Recovery and Reinvestment Act, or our A our A, which many of us called stimulus at the time, you know, now there's been more stimulus since then. But that act, it's sometimes hard to find exactly what we funded there outside of consolidator works from places like the General Accountability Office. So hopefully we'll keep up this online resource people always will be able to reference it. And again, there's I think I mentioned earlier there's links to other associations and in parallel research groups to ours. We really do need it to be a hub, it's public open facing. And ideally it gets you to the place you want to go. If it doesn't have the answers, you're looking for itself. Just a final question here. And I will have a link to the actual resource hub. But any additional resources, any places that you would direct people to?

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Doug Parsons 15:14

Are you accessible or people at your team? How does that all work?

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Adie Tomer 15:17

Yeah, so folks can find us through the web, you know, there's a Brookings at some kind of portal that, you know, email messages get to me. So if you're looking for me, you can find me online. And if I don't know answers to questions, like we said, for the resource, we'll make sure we get you to someone who does. So don't hesitate to reach out to us, we do have links to the

other key groups on here. And I would just stress, especially for your audience dug that to really just take a SPIN with the resource. There are so much resilience focused programming in this bill. It's almost unlike anything else I've seen in 15 plus years. And as folks have said, right, especially for the IRA, but now even with the IGA. With such a historic investment, it really is the first kind of modern response to the current kind of climate crisis. Right? You know, obviously, we have the clean water and clean air Act's right. But that was for kind of a different vintage of climate need. This one is really unique and the amount of investments that are made and either human made or natural made solutions and interventions. There's money for the Army Corps for interior for NOAA under commerce. I mean, every agency has both traditional and new programming that are related to climate. So even though you've seen the top line figures, what I would stress to folks is take the time to kind of spin or explore the bill, chances are you'll find some programming that you may have not heard of that can hit the exact notes you're looking for on how you think states, localities, and their private sector partners should be investing in a safer, cleaner future for

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Doug Parsons 16:39

everyone. All right, fantastic. Thanks, a D, and thanks your team for putting this together. It's gonna be a great resource or it is a great resource. Thanks for coming on. Thanks for having me, Doug. Hey, adaptors Joining me today is Dr. Shalini. Valhalla. Shalini is the founder and CEO of refocus partners. Hi, Shalini. Welcome back to the podcast. Hey, John,

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Shalini Vajjhala 17:00

great to be back.

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Doug Parsons 17:01

Let's just jump into this. But first, you have been on America daps. Before and we were talking about infrastructure, but it's been a while. Can you tell us what you do there? And what is refocus?

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Shalini Vajjhala 17:10

Yeah, refocus is a design firm, where we integrate project funding and financing into the design process. And most of our projects are focused on climate smart solutions for local and regional governments. And the way we think about this is when we do our work well, success is something that doesn't happen. So a storm hits, but a community isn't devastated. So we really have to think about how the money works upfront, in order to pay for those kinds of projects.

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Doug Parsons 17:39

It's really interesting. And this rarely happens. But when you were on the podcast before I titled it, and this was language that you've used once in a generation investment, and this was before the passage of the infrastructure investment act. So it actually happened, this never

actually happens with Congress. That was great news. But actually, the the hard part happens now, right?

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Shalini Vajjhala 17:59

Yeah, this is the start line, not a finish line. So it's always exciting to see huge money announced for things you care about. But this is very much the beginning of figuring out how to spend this money well and with lasting impact for community. So I think of this as wholly inadequate and completely transformational all at once.

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Doug Parsons 18:19

Right? You gotta come early, the grants. Alright, we'll dig into that a little bit. How big a deal is this funding.

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Shalini Vajjhala 18:24

This is the most money we've seen for infrastructure since Roosevelt. If you think about all those things that were built 5075 years ago, that have had lasting impacts on our whole society, where major bridges are where we've been able to protect and preserve and conserve forest lands. We're at that same CUSP for rethinking industrial policy, rethinking how we do conservation, and repairing and rebuilding our infrastructure. So we build what we need next, not just what we had before. So I'm tremendously optimistic about it.

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Doug Parsons 19:01

Well, it got a lot of attention. And then we had the Inflation Reduction Act, which you're gonna bring up a little bit, I think in this conversation, but really big deal, a lot of investment in the United States. And I think people are very excited for on the climate side of things. And so I'm brought you on because of what you do there refocus, and we're gonna have some local government perspectives coming on after you. But let's say you're listening to this and your local adaptation professional. How would you recommend that get started in all this?

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Shalini Vajjhala 19:27

Yeah, so the first thing I would do is take a deep breath and focus specifically on the money in the infrastructure investment and jobs act. There have been a flurry of bills over the last year and the most relevant for local governments right now, after all of the COVID recovery and relief funds are the funds that are in IJA, the infrastructure investment and jobs act and what makes this money so interesting is that it's going to come out in a variety of ways. I think about it as more water through existing fire hoses. So everything that we have been spending on infrastructure is gonna get supercharged over the next five years or so. So that includes transportation, water systems, energy, all the traditional stuff. But there are also dedicated climate specific funds that are really big opportunities for folks who have been really kind of scraping for money over the last 10 years or so since the recession in 2009. So this is a real

opportunity for thoughtfully investing in planning, making the best use of climate funds, but then positioning really carefully so that you can take these more traditional colors of money and traditional sectors, and shift them toward more climate smart decisions. So the way I think about that is when you think about green stormwater, infrastructure, all the things that turn a city from a funnel into a sponge and make it more climate resilient. How do you make those same things improve pedestrian safety. So now you can use a street tree to slow down traffic, and absorb water. So you can use three colors of money to advance more and bigger projects that were traditionally underfunded.

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Doug Parsons 21:09

So it sounds like taking advantage of these federal funds will require new kinds of collaboration. So how can a local government official or adaptation expert build productive cross sector collaborations?

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Shalini Vajjhala 21:19

And this is such an important question that because everyone right now is both excited and completely overwhelmed. These funds are a huge opportunity, they also require a huge amount of effort. And so if you think about how you as an adaptation, professional folks on the field that are listening to this would apply for federal funding for adaptation projects. Everybody in every other sector is going through that same painful process to identify sources of funds to develop applications and projects, and then get through the process of submitting those proposals. The best way to think about developing collaborations with folks across different sectors is to look for how you could make their life easier, and make their application more competitive. So that example of the street tree improving pedestrian safety might really help a local transportation professional who is looking at how to meet all of these new requirements for resilience in the transportation programs, the most successful collaborations and collaborators will be coming with that value add and the short term benefit to coordination, the stuff that requires everybody to slow down. And to add effort is going to be more challenging. So I would encourage everyone to think about how do you make someone else's job easier by adding climate smart, resilient, and adaptation friendly elements to their projects. And that in some ways, is going to require you to take the first step and learn how to speak the language of that sector, whether it's emergency management, or transportation, or water, for example.

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Doug Parsons 22:59

Alright, so you mentioned how painful this process can be for a lot of local governments. And so federal funding generally is a pain to get and work with. And there'll be these barriers and challenges. So how can folks who listen to this podcast anticipating get ahead of those barriers to make the most of the next several years worth of funding? Because there is a bit of time that they can still prep for this, right?

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Shalini Vajjhala 23:19

Absolutely. It's not too late. I know there's a lot of attention to the urgency around this money, and it is urgent. But we have a three to five year window ahead of us to set the stage for what

and it is urgent. But we have a three to five year window ahead of us to set the stage for what we build for the next 15 to 25 years. So it really it's not such a small window that you need to panic, what you need to do is prepare and the word that describes a lot of what we do inside refocus is pre development. This is all that really early and intentional coordination and planning and widening of the imagination that needs to happen before you write, for example, a request for proposals. And I know the last time we talked we talked about the example of the city of Hoboken, which was under 12 feet of water after Hurricane Sandy, the city of Hoboken did exactly this, they really widened the imagination. They looked beyond what they needed to buy right away to what they needed in 10 years or 15 years. And so they went from thinking about buying a pump to reduce flooding, to building a six acre resiliency park that provides recreational space flood protection benefits, an ice rink and municipal parking. That kind of early and intentional investment in pre development is what we do at refocus. But it also sets you up for transformational investments instead of just replacing what you had. And so I would encourage folks to really think creatively, to widen the imagination to take a deep breath and aim bigger than they might otherwise

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Doug Parsons 24:52

in regards to what you guys do specifically in helping local communities and nonprofits get through this. You've shared with me some resources Tell us about this pre collective. What's the whole purpose of that?

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Shalini Vajjhala 25:04

Yeah, I'm so glad you're asking about this DAG, pre collective. It's a new initiative that we've developed inside of refocus, that we're anticipating spinning out into an independent entity to support local governments communities, on all the aspects of pre development, all the building blocks from going from a need to an idea to a viable and impactful set of infrastructure projects, we're going to have a bunch of resources available on the refocus website and expanding over the coming months to directly serve communities that are dealing with these challenges and help them get organized to build coalitions. And to aim high and set realistic expectations for how to apply for all this federal money and make good use of it.

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Doug Parsons 25:48

All right, I'm going to just pivot a little bit here and talk about equity and climate equity and climate justice that is built into the infrastructure funding, a lot of times local governments, they're just ticking off boxes. And so give us some background, how are you helping cities actually factor that in in a meaningful and substantive way?

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Shalini Vajjhala 26:07

I'm gonna give a two part answer here, because I think there's a top level set of things that are happening on equity, where there's a real genuine investment in making sure this money doesn't just go where all the money has in the past, and that we reach new and different kinds of projects and reach communities that have been historically last in line or left behind entirely for infrastructure investment in those intentions are very good. But the reality is of how this

program funding is going to go out, are sort of in their own way. A lot of the money for infrastructure, like I mentioned, is going to go through existing fire hoses. For the folks who are familiar with how this works. Those are typically called formula funds, they're distributed to state and local governments through a formula. And that means you just get a certain amount, and then the spending is decided at the state and local levels, where the equity pieces really come into play is with competitive grant programs, where there's more discretion at the federal level, on how to allocate the money, how to distribute it, and to make sure it reaches folks that might not have always gotten the same grants in the past. So I think there's a huge amount of promise because as you've heard him earlier segments of this podcast from others, like the folks at the Brookings Institution have really broken down these different colors of money, and how they're getting to the ground. One of the things we do inside, refocus, going from the bottom up to really prioritize equity is we'll ask two separate questions. One is, who loses money if you don't do the kind of project you're thinking of? And the second question is, who suffers if this work doesn't get done. And the example that I use most often for this work is if you think about transit systems in high heat, well, who loses money, oftentimes, it's the transit authority itself, when it's really hot out, they run fewer trains, or they have less service, and they run them more slowly. And they pay more for insurance for overtime. When they have workers out in high heat. There's a direct loser from climate impacts on transit systems. When you ask the question of who suffers, though, you can immediately picture an older person, a transit dependent worker who's sitting out at a train or bus stop longer in the hottest days of the year, because that service was slowed down. If you ask both of these questions together, you come up with a solution that serves the equity need, but also is more fundable and financial. If you ask them separately, you get answers that actually undermine equity. You might go for example, and say, I need to build a better bus stop. And that infuriates me, because you're not solving the core problem of leaving people out in the heat longer. Or you might say, I need better insurance for the transit authority and high heat, where we see the sweet spot of really being able to design fundable. community centered equitable infrastructure is when you ask both of those questions together, and make sure that design solutions are responsive to both.

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Doug Parsons 29:15

Alright, fantastic. You recently gave a presentation on helping groups align these federal funds to help with conservation. And this is really important to me. So this infrastructure money could also lead to some nature based adaptation. Can you tell us a bit about that? What were your main points without I guess, going through all the slides,

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Shalini Vajjhala 29:32

there are some fantastic philanthropies and groups that have been really working at the regional level where I see a lot of promise to coordinate a wide variety of stakeholders. In this case, it was environmental groups and the Chicago region. And one of the things that I think is really fantastic about this infrastructure money is that the definition of infrastructure has gotten a lot wider, where there's a real emphasis on nature based solutions, everything from urban wetlands to manage stormwater or to upstream land conservation that can reduce fire and flood risk. There's funding available for all of these things. But it takes a different level of coordination and organization. And one of the things that I really tried to emphasize in these conversations to these groups is pay attention to the seams of your projects. So think big,

widen your imagination, this takes some practice, because we really have gone from a scarcity mindset around funding for climate activities writ large to an abundance mindset. And so in a lot of ways, I spend time talking to people and saying you need to add a zero, you need to change the scale of your thinking around this project. So you go from a single site to a landscape scale project. So that's the first part is widen the imagination. The second part is you have to really think about the coalition's you need to build at the seams with traditional sectors. In the case of conservation, a lot of times transportation has the biggest money. And if you talk to a transportation professional, they might know how to make a road more resilient. But they might not think about how a road could be a buffer for a vulnerable ecosystem, or redirect flooding. And those are the opportunities where many folks in the conservation community need to recognize that they might not be the direct applicants for specific funds, but they can absolutely be the champions for wholly different types of projects. So we're spending a lot of time organizing folks and helping them understand where they are the applicant or where they are the champion. But I think it has tremendous promise for the whole field of conservation.

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Doug Parsons 31:40

I love this message that you're sending in a previous life I work for conservation group, I work for the State of Florida and their conservation agency and I was pushing adaptation is this really once in a generation opportunity to actually do more meaningful conservation? Because I think there's like you, you've mentioned before, there's a lack of imagination in certain groups, and they just stay in their own silo. And so what you're, I think, some things that you said in this presentation, like aligning physical and financial protection to the value of environmental protection, it really, we could screw it up, you have things like maladaptation, which doesn't benefit the conservation sector. But I think there's a huge opportunity here. And I just think the environmental sector, and I have a lot of listeners from the environmental sector who listen to this podcast, lack that imagination, and they can't tap into these huge funds in there's just this rare opportunity to do it. So I love that you're sending this message out there.

S

Shalini Vajjhala 32:33

I'm so glad that you've been carrying this flag too, because I think a lot of times we have to make the case for conservation or for environmental goods. And now I think we're at an inflection point where we have to show how conservation adds value to other types of projects. It takes a shift in thinking, but I think it's going to increase the funding available and the opportunities available for meaningful conservation. For the next decade to come.

D

Doug Parsons 33:00

Well, I was giving these presentations in like 2004 2005. So that's old school. And so it's just kind of went in retreat. I'm glad to see it, you're out there. And hopefully you're gonna bring it into these kind of partnerships that you do. So on that note, you've been fantastic. And it sounds like you guys are just really they're providing a resource for these local communities. Any final advice that you can give groups out there people that represent local communities or nonprofits that might work with them? And if they want to work with you, what would you recommend?

S

Shalini Vajjhala 33:28

Well, the advice that I would give to start is, keep your chin up, it's not too late, and pick a few places to start where you feel really optimistic about being able to do something different or bigger than you've ever done before. And once that ball gets rolling, you'll be able to build momentum, to keep up the next three to five years worth of opportunities. In terms of how to work with us. We're really excited to be launching the pre collective. So stay tuned. We'll have information up on the refocus partners website at refocused.partners.com and also at precollective.org. And we'd love to hear from folks who are working on the ground and what you're challenged by and what you're excited about.

D

Doug Parsons 34:09

It's always a treat chatting with you and thanks for coming on and sharing your message.

S

Shalini Vajjhala 34:13

Likewise, thanks for having me.

D

Doug Parsons 34:18

Hey, adapters. Joining me is Dr. Braden K. Braden is the director of sustainability for the city of Tempe here in Arizona hybrid and welcome to the podcast. Hey, Doug.

B

Braden Kay 34:25

Thanks for having me.

D

Doug Parsons 34:27

First off, can you briefly describe your role there at sustainability director for Tempe

B

Braden Kay 34:31

here in Tempe? I'm the director of sustainability resilience. We have an office currently have five people I started with the city about six and a half years ago, we created our first climate action plan with a focus on carbon emissions reductions around energy and transportation. And then our main focus has been from the beginning on resilience to extreme heat. We then created our Climate Action Plan, update and 2022 where we really focused on four stakeholder agendas, climate justice, youth neighborhoods and Isn't this in an effort to really co create? How our city does adaptation work with residents, businesses, community based organizations, and now we're working a lot to try to take those approaches of equitable urban cooling and equitable resilience work to the regional level here in Maricopa County.

D

Doug Parsons 35:18

So you're talking about heat and just a little bit digging more into what you're doing there. So what did adaptation resilience look like? And heat is your focus, but literally, what does that look like on the ground.

B

Braden Kay 35:27

So when we first started off with our first heat plan, here in Tempe, we had four action areas that we really wanted to get to, we didn't have an emergency manager at the time, we were the largest city in Arizona without one. So we created a new emergency management focused making sure that that emergency manager wasn't a 20th century emergency manner, but a 21st century emergency manager, really, with a large focus on community resilience and extreme heat mitigation. We also had never had an urban forester and we're able to have an urban forestry master plan and start to heavily invest in our urban forests. And in tree shade throughout the city, we then knew that we needed to change our built environment. So we looked at embracing the International Green Construction Code, as well as starting to look at Green stormwater infrastructure, and our stormwater standards and requirements. So that's how we started this work in terms of saying these are the policy levers that we have to address. What was really interesting though, is on the built environment side, it was really hard to motivate that change with our first Climate Action Plan. So when we did our update in 2022, that's when we really dived in to doing three highlight actions, one green codes and standards, adopting the International Green Construction Code, moving towards eventually having that as a mandatory adoption and working on making sure we have a building code in the southwest that is truly ready for the drought and extreme heat that's coming. And the building code that meets the moment, there's a real opportunity for that. And then a city of Tucson has been incredible leaders in green stormwater infrastructure, making sure that the rain that does fall, the storms that do happen, are turning into shade. So they've just recently made permanent their storm shade program, we want to do something like that similar in Tempe. So what we've known about our resilience to extreme heat work is it needs to involve response, it needs to be immediate response and heat relief. But it also needs to be doing long term preparedness and prevention work, including changing what our built environment looks like, you know, we have a huge urban heat island effect here in the Phoenix region. And we really need a transformation in how we approach landscape architecture, the built environment, and how we improve approach land stewardship in our region, and in Tempe specifically.

D

Doug Parsons 37:38

So let's talk about federal funding, specifically the infrastructure investment act. And if you could, no acronyms just for not everyone's familiar with it in that respect. But in regards to this money, that's still just getting out there. You're gonna walk us through some of the things that you're doing. But you guys really prepped in advance. Tell us a bit about that. Yeah, so

B

Braden Kay 37:55

we knew that the federal investment that's being made in infrastructure is really important in terms of allowing for the next wave being collected in terms of our transformation. I talked about

terms or allowing for the next was huge milestone in terms of our transformation. I talked about the importance of transforming the built environment, well, now we need the resources to do it, we need to put the pedal to the metal. And one of the things that was really clear from the very early stages of the Biden administration was this was not your grandmother's infrastructure package, they're really clear that they want to see infrastructure that is multi jurisdictional, meaning multiple cities going after funding in the same application, they want to see a deep involvement in community based organizations and making sure that that you know, a large portion of that infrastructure, at least 40%. That's what it's called justice 40 is targeting the residents that are the most marginalized and needed the most, and that this infrastructure is really coming from community voice and partnership, it was also very clear that these investments need to see job creation, they need to see transformation, you need to be able to tell a story about how your infrastructure is building a better future in your city in your region. And so that we built upon some existing regional resilience collaboration that had been happening, led by our county health department, they had done five or six years of wonderful regional resilience work bringing in stakeholders, centering equity and community based organizations. And we knew that there was really an opportunity to move that forward. So we partnered with our local health foundation, and they were able to bring us some funding to help us sort of understand what is this moment of collaboration and infrastructure investment, and we ended up having three focus areas to this coordination work, one being bringing cities together so that they're really ready for this multi city collaboration. In all honesty, back in the Obama years, when we had the last round of funding, so many cities just went and did individual applications. I was part of some processes where we've tried to get multi city efforts together. It's just so complicated to get multiple jurisdictions on the same page about how to invest in money, that it's a lot easier to go it alone and So it was really important as before the infrastructure bill even passed, even when we knew it was coming. We were doing this kind of collaboration and capacity building with cities to get them ready. We also knew we needed to make a deeper investment in how we work with our community based organizations. And I think it's something really important for us to understand as an adaptation profession is when we talk about justice 40. And when we talk about equity, it doesn't look the same anywhere in the country. And it actually doesn't look the same. You know, within a state, there's going to be different political, economic, and cultural issues that make the justice 40 conversation look different in different places. And so we don't have in a lot of Sunbelt cities, and especially, you know, here in the Phoenix region, we don't have the same civic infrastructure that you might in California or Washington state, or you might on the east coast. So it's really important to make sure that community based organizations are brought in, in a different way. So what we did with this Health Foundation monies, we actually gave over a half of the money to to local community based organizations had them distribute many grants out to local nonprofits and community based organizations to decide how they should spend the money. So we flipped the script. Usually, cities get the money, they decide what community based organizations to work with, we realized to build that justice 40 muscle, we need to flip the script and try something else out. And so we're now just getting feedback. We had an irrigation project that a local nonprofit orchard did, we had a really interesting indigenous irrigation and gardening project of installing backyard gardens on our one of our local Indian reservations, SR PMIC. So there were really interesting things that happened when we flip that script. And we believe that we're building our justice 40 muscle here in Maricopa County. And then lastly, the third piece of this is in a state like Arizona business voice really matters. And the business community really needs to be a part of the conversation, both in terms of thinking about what infrastructure is needed for economic vibrancy, like the transportation infrastructure, housing, infrastructure, a water infrastructure, but also making sure that the business community is really on board with the type of infrastructure investments we're making. And so we have a variety of environmentally minded business organizations and some more traditional business organizations that are

finally getting to the table and starting to talk to each other and starting to talk about what is the economic impact of not handling extreme heat, The Nature Conservancy in a calm did an incredible economic impact assessment, they assessed that if we didn't handle extreme heat was billions and billions of dollars that we our region could lose if we don't take action. And they looked at the economic impact of investing in Cool Roofs and investing in urban forestry in our region. And they showed incredible returns on investment for both of those types of infrastructure changes. And they've been working very heavily with the business community on making that case. So that's some of the groundwork that we feel is really necessary, I think, for the regions that are out there for you adapters that are want to be making local change, you cannot wait for the grant guidelines to drop, you need to start doing that groundwork, that relationship development, that capacity building, understanding what types of infrastructure could be invested in how to do multi city relationships, how to bring in CBOs, and how to embrace your business community in this conversation. That's certainly what we've been trying to do in Arizona here.

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Doug Parsons 43:27

Sounds like there was a local focus there. But you've talked about it being a regional approach. What do you have in mind when you say regional, how does that reflect when you're actually getting ready to apply for some of this infrastructure grants? I mean, you're working locally, and you're giving money some of those groups. So has the regional coordination actually work?

B

Braden Kay 43:43

Yeah, it can look a variety of ways. One example I really love is we have a great group out of Arizona State University called Rio reimagined. And so when we go after the Department of Interior's ecosystems, restoration money, we're going to be able to put together a grant that has money going to SRP MIT, the Salt River Indian Community, the city of Phoenix, the city of Avondale cities all along the Salt River watershed. So that's a perfect example of hey, you could traditionally have had a grant and we actually have had grants for the watershed that have only gone to the city of Phoenix but the city of Phoenix has, you know, I don't attend to 15 mile stretch of the Salt River, we have a larger stretches that are at the Salt River Indian Community, Tempe and Mesa and Avondale in other cities have stretches of this of the watershed, as well. And so this is a perfect opportunity, most infrastructure coming through your city, whether it's water infrastructure or electrical infrastructure. It's not it doesn't stop at your city lines. It's it really is multi jurisdictional and so that real reimagined is one example. There's examples of a recent Energy grant coming out of this funding that's actually pairing Northern Arizona, Southern Arizona and central Arizona into one energy innovation hub looking at how we handle upcoming extreme heat and embrace new types of energy technologies to help us with that. So there's definitely a huge focus on understanding a lot of the investments and planning that needs to happen is needs to happen at the county, the multiple county or even the full state level.

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Doug Parsons 45:17

How does climate resilient Maricopa play into this? I've you shared this with me it looks really interesting. That is sort of a product of this regional coordination. Could you kind of dig into that?

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Braden Kay 45:26

Yeah. So what we did is we took the work that the county had been doing for several years, they had funding to start a regional collaborative. That's how we got to this America county collaboration work as we are at now. And really, it's still a very loose organization of having cities and our county, and nonprofits and Arizona State University all at the table. And then there's a real discussion about what does this kind of governance look like moving forward? How do we organize ourselves around resilience and resilience investments. I'm really intrigued by some recent work that's happened in Annapolis, Maryland, where the city of Annapolis partnered with Anna Rundle county to create a regional resilience authority. So they now have an authority that's bigger than just the city that can bond for infrastructure, they can design infrastructure, they can implement infrastructure and their case, they're using sea level walls. In our case, we need deep regionwide. county wide investment in urban forestry and green stormwater infrastructure in electric vehicles in resilience hubs in cool corridors and shaded streets, in more dissemination of transit shelters. So there's a lot of these kinds of countywide infrastructure that we really can't expect every city to figure out how to finance and design and coordinate themselves, we need some way of doing that. And so we definitely finally now have our local MPO at the table. But in all honesty, I think we're really at an inflection point in this country to say, you know, the MPOs were created out of out of the 60s and 70s, what's an MPO municipal planning organization. So your visible planning organizations were really created to help disseminate and work through federal funding for transportation infrastructure, and some MPOs around the country might be able to disseminate resilient infrastructure money. The problem is, is that a lot of those MPOs have governance structures that don't embrace equity, that don't really understand that when it comes to climate change, they can't be a peanut butter approach, where you just give every jurisdiction, you know, the same amount of money, we need to be investing in vulnerable communities that need those investments the most. And traditionally, MPOs have not been able to figure out how to have those regional conversations about targeted universalism and targeting investment with the people that need it most. So it's possible that maybe our MPO, or municipal planning organization, which is the Maricopa association of governments can meet the moment and figure out how to have a be in charge of a long term funding stream that allows for this kind of equity focused distribution for the communities that need it the most. But we also need to be prepared for the potential that we need a new type of governance solution that allows for this kind of equitable implementation of resilient infrastructure. It's a very in the weeds issue. But it's really important to think about, and we have some regions in the country that are really strategically thinking about how do we understand, hey, if we don't fix this South Phoenix heat problem here, it's going to matter to everyone. And so, yes, maybe I'm a Tempe taxpayer, and I want my dollars going to Tempe. But I also need my dollars going to places in the region that need to fix those problems. Otherwise, those vulnerabilities that are in one place in the county become all of our vulnerabilities during the worst extreme disaster.

D

Doug Parsons 48:57

This is great. And there's a lot of process here and you're talking with the right people that say you're gonna represent everyone. Are you at that stage? And I think there were some workshops involved with climate resilient Maricopa, but do you have Is there a agreed upon, I guess laundry list of projects that when it comes down to this is about submitting for grants,

right? It's you have this federal money, and you're just gonna submit it and you're trying to get it? Are you at that stage? Have you identified specifically these projects? And that's what the next phase of all this is going to happen?

B

Braden Kay 49:26

Yeah, so we do have some agreement on critical areas. So we have a group of cities that are looking at and working on electric charging infrastructure. We have a group of cities that are working on resilient building code. We have a group of cities that are working on ecosystems, restoration and urban forestry. We have a group of cities that are looking at energy insecurity and energy resilience. So I'll be totally honest at a very high level I we do not have agreement on the things that you know, are very specific strategically. List of investments. But at a lower level, we definitely have six or seven areas of infrastructure that we have multiple cities, NGOs, community based organizations, Arizona State University and others at the table, having those conversations and getting ready for those grant applications, there's a lot of work to be done to have that really regional wide vision. And that's actually why we hired Selenium to help us with that region wide vision and help us with a little bit more direct messaging and cohesion around where we should be going together. But we've been struggling as a region to get that full, comprehensive vision. But we do have some consensus on six or seven areas where we are prepared to be putting together multi city multi jurisdiction applications and be able to do that in the next few years.

D

Doug Parsons 50:48

So that's great. And I think what's really kind of nice, too, is like when these bills are passed, it's not like the government's ready to write checks, it takes them a while, it's my understanding, it takes them a year, it takes them 18 months before they've identified their priorities and how they're even going to get this money out there. So that's great that you guys are just prepping for that process, when you can actually start submitting those grant applications. You're there, you're close in this list of priorities for the community. And five years, seven years from now, when money has actually been spent projects have actually been implemented. You have a citizen of the city of Tempe, Arizona, or you have a local elected leader. All right, what did we spend this on? Could you just give us two or three examples of what that might look like? I know you still are figuring out those priorities. But for them to visualize ultimately, how this adaptation funding might look like on the ground.

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Braden Kay 51:34

Well, one amazing project example that's already gotten funded is the third street pedestrian bridge in Phoenix, the Rio Salado, the salt river that I mentioned previously, it has very few crossings that are useful for pedestrians. So this bridge is going to bridge our downtown to the south side of the city, and help with regional connectivity. That's a really exciting investment that we'll see completed in the next five years, you're gonna see a lot of investment in electric buses, electric school buses, Evie charging, when you go to the airport, you're gonna see airport upgrades at Sky Harbor. And actually a lot of airports in Arizona, when you turn the tap on, you're gonna be having better water security and more assurance of clean water because of investments by the Clean Water Revolving Fund, and investments being made in

groundwater storage, you'll see a lot of highway improvements that are getting made, hopefully less issues with some of the highway infrastructure that's been falling apart in Arizona that we're able to invest in, there's \$67 million worth of flood mitigation investments. And then the another really important investment, we don't always think about it as a resilience investment. But it's something we've been working on in Tempe, and we're gonna get money statewide for digital equity, making sure that we have broadband throughout Arizona, as well as broadband investments in some of our most marginalized and low income neighborhoods. So you're gonna see it across the board, from turning on a computer to turning on a faucet to jumping on a bus to taking a walk to the other side of town, to getting on a plane at the airport, there are going to be improvements that get made with this money. So it is really exciting. Over the next 510 years, there's a lot of transformation that you'll see with this type of investment. And then the exciting thing is this infrastructure investments going to be paired with investments coming out of the Inflation Reduction Act that deeply invest in solar and resilient energy solutions. And so the pairing of the infrastructure money with the upcoming IRA money, we're gonna see a lot of change in our communities, both in Arizona and across the country.

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Doug Parsons 53:36

Okay, so a lot of exciting things are in the pipeline for the region. But this federal funding, we'd like to think it's not just a one shot deal, you know, there's a larger purpose to what you guys are doing there, because you want to make the point that longer term funding is important.

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Braden Kay 53:51

Absolutely, Doug, and I'm so glad you brought this up. If we really want to make sure that in the 2030s 40s 50s, that our communities are truly resilient to the sea level rise and the extreme heat and the floods and the wildfires that are coming. We cannot, we cannot ride this roller coaster of federal investment where we get a bunch of investment for years, and then we get a no investment because an administration doesn't value it. And so we have to be creating state, regional and local funding models that make sure that we're constantly and consistently funding and climate no matter who's in the White House. So Ann Arbor just passed a climate millage so that they'll have that investment. A city and county of Denver have made that green New Deal investment and City of Portland has also made that investment in equitable climate change. We need a lot more jurisdictions figuring that out. Here in Tempe. We're trying to create a urban cooling and stormwater utility where residents are helping pay for the cooling infrastructure that are needed for our city. And I think that there's real opportunity to have those kind of utilities or authorities where residents are paying into a pot of money that are helping with that kind of resilient infrastructure. So what's so important about this federal money is that cities and counties and regional planning organizations have the opportunity not just to use the money to get an piece of infrastructure in today, but they can use that to make the argument with their residents and their business community, and their community based organizations that they need more consistent local and regional funding to be able to put in that same type of infrastructure that we're getting out of this federal investment, but getting it more regularly for a 1020 3040 year period. That's where we absolutely need to get the kind of security and climate resilience that we need to come to face the upcoming storms and droughts and, and heat waves. I really hope that as we all work together on spending this infrastructure money, that we really don't view it as just a one time opportunity. But we you

you view it as an opportunity to build the climate movement to build the adaptation movement, and to convince ourselves that this type of deep investment needs to be made consistently for the several next decades to come.

D Doug Parsons 56:07

Okay, fantastic message. Alright, just final message. If people want to learn more about what you're up to it, what would you recommend that they do?

B Braden Kay 56:14

Great? Well, you can absolutely come to our website tempe.gov, [backslash sustainability](http://backslash.sustainability), or you know, we have great work in Arizona. So absolutely check out city of Tucson city of Flagstaff City of Phoenix, we now have climate action plans in city of Scottsdale and City of Mesa as well. So really exciting work happening in the sustainability space here in Arizona, and then also encourage you to look at what our profession is doing through the USDA and website, the urban sustainability directors network, of which I'm a member as well. So, Don, thanks so much for having me on. And I really hope that folks are understanding the opportunity of investment that's here and making sure that we're making the most of it and building in terms of building more resilient communities across the country. Really appreciate all the work that you're doing to make sure that adaptation professionals across the country are sharing best practices and understanding the opportunities ahead.

D Doug Parsons 57:10

Hey, adapters joining me is Samantha Medlock. Sam is the former senior counsel for the House Select Committee on the climate crisis in the US Congress. Hi, Sam. Welcome back to the podcast. Hi, Doug,

S Samantha Medlock 57:20

great to be back with you. Okay, we're

D Doug Parsons 57:22

gonna be talking about that infrastructure investment act. That's what this episode is all about. But before we do that, let's catch up a little bit about that House Select Committee on the climate crisis, there have been some changes and changes with you. Can you just update us on what's going on?

S Samantha Medlock 57:35

Sure. Well, the select committee on the climate crisis was created in the 100 and 16th. Congress to make recommendations and a report on actions Congress should be taking to

confront the climate crisis, we've delivered on that. And then we were brought back in the 100 and 17th, Congress to work on implementation of that body of recommendations and work, I think your audience is where we made very good progress over the arc of the existence of the committee, of course, as a select committee at the end of the 100 and 17th, Congress Committee was dissolved without many prospects for it being brought back, at least in its climate focused form by the current Congress with 108 teeth, of course, with Republicans in the majority. So the committee has been stood down. But I believe that the legacy of that committee, the extraordinary body of work, that the great roadmaps that we created, will live on and continue to drive climate progress.

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Doug Parsons 58:36

Well, we just want to say on behalf of my listeners, I'm sure they agree with me just thank the committee for all the amazing work, and it is a shame that it's gone. But we are hoping that in a future Congress something similar or something, you know, comes back and because obviously, the work that it did was critically important. And so I wanted to bring you on, and we're talking about the infrastructure investment act, the history of it, it was quite a journey there. And I'm curious in regards to the select committee on what was going on, how did it inform the whole infrastructure act? Sure.

S

Samantha Medlock 59:04

Well, we recognized early on as we I'm going to say we because I just still feel this select committee so close to my heart, but we really recognized early on that there was a need to focus on the nation's infrastructure crisis and need in the context of extraordinary economic stress, a lot of it pandemic driven a need to create jobs. So there was a with strong leadership from the Biden, Harris administration and strong leadership from Speaker Pelosi and our counterparts in the Senate a real focus on infrastructure. I think what we saw was initially, maybe around 550 to \$700 billion infrastructure package and through negotiations and work. It was renamed the infrastructure investment and jobs act to include funding not just for core infrastructure that we think of our nation's bridges and roadways, our water infrastructure, but also things like broadband and telecommunications, and particularly the electric grid, along with lots more. So we ended up around \$1.2 trillion in spending around 500, maybe 550 billion of gapping, newly authorized spending. And of course, we've been in the implementation phase of the IGA also known as the bipartisan infrastructure bill, or bipartisan infrastructure law, since it was signed into law by President Biden in November of 2021. So it's been a fantastic ride. But I think a lot of the focus now, of course, is on implementation and fulfilling the promise of the bipartisan infrastructure law,

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Doug Parsons 1:00:46

I guess, inform the timing of this because you'd mentioned the select committee had this mandate to write this report solving the climate crisis. How did that overlap with the infrastructure? And I guess I'm not, you know, keeping track it was that before was that after? And I think, I don't know probably some think tanks out there, they're probably cross referencing is that you know, these recommendations that you made as part of the Select Committee, you know, what got into the infrastructure act?

S

Samantha Medlock 1:01:10

Oh, of course, that's a great question. And it's a neat story. And I think part of the reason that I was brought on board was to think through the issues of adaptation, resilient preparedness for the built environment and leveraging healthy ecosystems. And all of this makes its way into the select committees, majority staff report that was issued in June of 2020. And really served as that comprehensive roadmap to drive climate action, not just in the realm of decarbonisation, and reducing pollution and greenhouse gas emissions, but also advancing public health, advancing public safety, and strengthening the built environment. So we worked, of course very closely with stakeholders and experts, the think tanks that you mentioned, to formulate those recommendations. And I will spare you having to read through the full 550 page report that we issued in June of 2020. But there are recommendations that we made directly to the authorizing committees of the House of Representatives that then form the basis and inform the design for the bipartisan infrastructure law as well as the Inflation Reduction Act and other bills. So for example, specifically, we made recommendations around transportation, infrastructure, ways to make sure that our investments in infrastructure are going to be designed and sited to withstand the impacts of the climate crisis. Similarly, with the electric grid with water infrastructure, whether it's wastewater treatment, or water supply, with, again, telecommunications and broadband with our nation's dams and levees that provide critical flood risk management services. So it's all traceable, not only to the report that we issued, but to a long history of identifying the root of the problem with our nation's infrastructure, and making sure that if we're going to unlock tremendous transformational levels of funding, that it's going to go toward investments that are going to be built to last. And that is that line that's really traceable, from that imperative, into our recommendations, and then directly into the infrastructure investment and jobs act. But Doug, it doesn't just end with the bill becoming law right now. It's translating all of that great funding and authority into the implementation and making sure that those dollars reach the ground in ways that are directly responsive to needs. Alright, we're

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Doug Parsons 1:03:47

gonna be talking a lot about implementation with the guests that are on this episode. But just, I guess, a little bit more insider baseball, because people in the climate space a lot of times, you know, so much focus seems to be on the mitigation on the carbon side. And yet this infrastructure bill gave a lot, not everyone's, you know, happy, completely happy. You never get everything that you want. But resilience and adaptation actually got a lot of attention. And it is curious, were there particular representatives or staffers, they it seemed like they got it because it made that sort of final cut with some significant funding? I mean, where you were kind of seeing those pieces where adaptation wasn't being ignored.

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Samantha Medlock 1:04:18

Right. Oh, that's such a great point. You know, I think across the committees of the Congress, as well, as you know, right into the leadership offices, there has been recognition that adaptation and resilience must feature prominently in the authorities and the investments that we're making and into the thinking of day to day spending, and really embedding resilience into every federal dollar. I saw that commitment from members of the House and the Senate. I also

saw it from fantastic staff leaders who I think would hear from their constituents about these issues back home, whether it's the The ongoing trail of climate driven disasters, or just the grind of the day to day costs that our cities, our tribes, territories and states are facing, and the need for strong federal partners to help them meet those on the ground. And I think what we saw was that it really translated into a commitment, not only to go after the need to reduce emissions, but also to help the nation adapt and become more resilient to these impact. I really applaud just the amazing partnership that we enjoyed across every committee of the Congress. But you know, particularly for for this conversation, great work with a science space and Technology Committee, great work with the Transportation and Infrastructure Committee, amazing work with the Energy and Commerce Committee, armed services just did extraordinary work on the National Defense Authorization Act, which I know is a bit far afield for our subject today. But that's really how the select committee went about its work. And the day to day, no day was the same. We certainly conducted our own hearings, we issued our own work products. But we also were in kind of a think tank, if you will, within the House of Representatives to formulate these policy initiatives and make sure that we're translating, and working at the intersection of committee jurisdictions, whether it's flood, or drought, extreme heat, or wildfire, or public health impact, these transcend the structure of the committees of Congress. So that's really the role of a select committee is to work at the intersection of those authorities, and make sure that the policy that's being formulated in Congress isn't constrained by just one committee's jurisdiction and field of view. So that's a bit of that kind of insight or thinking that I think may surprise some over the course of the day, I probably would have conversations with all of the committees that I named, along with Education and Labor, which of course now the new Congress is education and workforce, and a numerous other committees, a small business committee, and that would be over the course of my average day. It was great fun. But I think it's that innovation that I think helped inform the design of the infrastructure, investment and jobs bill in ways that hopefully make it more responsive to those needs.

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Doug Parsons 1:07:26

All right, fantastic. And when people think of infrastructure and bridges and roads, they're not really thinking environmental justice, climate equity, climate justice, but that was an important priority when they were putting this bill together, right?

S

Samantha Medlock 1:07:39

No question. And just like resilience must be embedded in every federal dollar specific and intentional considerations of justice and equity must also be at the beating heart of federal decision making federal investment and federal priorities. So we see that reflected in the body of work, certainly that the select committee on the climate crisis produced, but also in the bills that we see passing the house and and making their way to the President's desk. There are numerous examples, but one that I'll point two, for example, the investments in the tribal climate resilience and infrastructure that we did through the bipartisan infrastructure law are really aimed at helping our most vulnerable tribal communities. We also see through the investments in flood and coastal resilience, more of that intentionality in those investments to reach disadvantaged communities and more. Lots of work in the water infrastructure programs in the program's going through the US Department of Agriculture and interior around watersheds, flood prevention and assistance with again dams and levees, lots of work and

wildfire that is specifically geared toward working closely with our communities to help our most vulnerable access to the help that they need. I think it's also important as we look at transportation infrastructure, that our nation has a history of fracturing communities and making it more difficult for those that are struggling on the margins in their day to day to reach good jobs, to reach access to affordable food, to reach access to affordable health care and to maintain and deepen those community networks that help environmental justice communities to survive too often in history, transportation investments, didn't take those things into account. So we see a real change in the way across a slew of agencies are going about implementing the bipartisan infrastructure law to pay attention and make sure that these investments don't have these you know, I'll call them unintended consequences, although some of it may have to There's been neglect, but without question, environmental justice, equity, and paying close attention to the way that these programs are implemented really must be embedded in every federal action.

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Doug Parsons 1:10:13

Alright, fantastic. once in a generation type bill, lots of money for resilience and adaptation, but there's always going to be gaps. There's always things that you wish you could have gotten in there. What were some of the discussions about, let's say, I guess a more proactive Climate Committee in the future gets to approach this again, what were some of those gaps? Where would you like to see funding or ongoing funding go toward adaptation resilience in this regard?

S

Samantha Medlock 1:10:37

Yeah, it's a great question. We definitely would have loved to have seen all of our recommendations translated into law, we got so much progress with more than 700 recommendations, more than 300 of those became a law. But you know, you're quite right, that there's more work to be done. You mentioned the need for that high level, comprehensive climate adaptation and resilience, strategic thinking through calling for a strategic plan, for example, standing up a committee or a task force. And there there was legislation filed, certainly to do that. I just didn't quite make it all the way across. But the national climate adaptation, resilience act, I think, is a really good example of one that I would certainly love to see brought back and make it all the way through the process. Another one that we did not get, and I think it really is more just by its very nature of being an infrastructure bill, is that attention to housing, and I applaud that House Financial Services Committee Chair, Dean waters in the 117th. Congress for her extraordinary work on on really advancing thinking and political priority around housing, including through her housing is infrastructure act that, you know, I personally would have loved to have seen get included in the bipartisan infrastructure law. If it were me making these decisions, I would really prioritize that, that national scale planning. That means not just planning in the federal government, but really deepening that vertical engagement with our states, tribes, territories, local governments, regional entities, like utilities and schools, and really advancing at a high level of planning and making sure that no one is left behind, whether it's, you know, smaller or rural communities, or environmental justice communities. And then the other big focus and attention I would give is to our nation's housing, we continue to be in a housing crisis in too many regions and neighborhoods. And so the investments that we see in helping reduce carbon emissions of our housing is great. We do see funding going toward pre disaster mitigation that can be reaching housing. But we've got so much more that we need to be doing to strengthen our nation's housing stock. And to make

sure that when we are building retrofitting, rebuilding housing, when we're doing redevelopment and infill in our urban areas, that we're building housing that is affordable, that is accessible, that's safe and sanitary, and that's resilient and built to last. This is for so many people, their single largest investment. So that's another big area of attention that I would love to see the current congress and this administration continue to focus on. All right,

D Doug Parsons 1:13:27

excellent. Okay, Sam, always a pleasure to have you on and I just want to thank you personally, for the work that you did on the select committee. Critically important, it will combat climate change isn't going anywhere. Thank you for all your efforts. And thanks for coming on the podcast.

S Samantha Medlock 1:13:39

Oh, thanks, Doug. It's been a privilege to be with you again. And thank you so much to you for your leadership and work. And thank you to your audience for their continued work. It is a decisive decade. We've got to keep up the momentum, but it's always so great to be with you.

D Doug Parsons 1:13:55

Hey, adapters. Joining me today is Tom Jacobs. Tom is the Director of Environmental Programs at the Mid America Regional Council. Hi, Tom, welcome to the podcast.

T Tom Jacobs 1:14:04

Hey, Greg. Nice to be with you.

D Doug Parsons 1:14:06

All right. It's a pleasure to have you on First off, can you give us a bit of background on the Mid America Regional Council? What is that?

T Tom Jacobs 1:14:12

I'm sure can Mid America Regional Council is the regional and metropolitan planning organization for the Kansas City region. So we are an association of 119 municipal governments and nine counties and in two states across the state line of Kansas and Missouri. So our business is to build collaborations across jurisdictional boundaries. We do that in a great many topical areas. I'm in charge of our environmental work. And so virtually every environmental problem thinking about air quality or water quality or resilience or waste, or all trans boundary problems. So my job is to bring community stakeholders together to figure out how we can work together to solve problems.

D

Doug Parsons 1:14:54

Sure, in the last 510 years, climate change has gotten into your portfolio and can you tell us a bit about class Climate change in your region, like what are the impacts that you're predicting or are experiencing right now,

T

Tom Jacobs 1:15:04

we did some downscaled climate modeling a few years back. And we found that there are three main natural hazards we expect to be exacerbated by climate change. So we're mostly concerned with riverine flooding with drought and with extreme heat. And we know that we're going to be seeing more intense precipitation, we're going to see that and the summer times, interspersed with longer periods of drought, expect substantially increased episodes of extreme heat, but we're working on that. Okay, so

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Doug Parsons 1:15:36

you've identified some of these climate impacts. But you guys actually have done some formal planning in response to that, what are some of those plans?

T

Tom Jacobs 1:15:43

Well, we sure have. So just before the pandemic, we started working on a regional climate action plan, and we had an incredible amount of interest in that plan from all around the community. In fact, there was so much interest that we had reserved one of the largest meeting rooms in our convention center downtown, and expected 750 people to turn up to help us think about what we should put in this plan. But we took it online, and we finished it up in March of last year, when our board of directors adopted that plans about two and a half years working on it. We did a regional greenhouse gas emissions inventory, a climate risk and vulnerability assessment. And we put that together with all the smartest people in town that we could find. We met with people from all parts of the community to figure out, how could we wrestle with reducing our greenhouse gas emissions through renewable energy through energy efficiency through transportation strategies through recycling and solid waste management through carbon sequestration? And at the same time, we were thinking about, well, how do we deal with the changing climate as it moves forward? Right, how do we adapt to climate change. And so there's a lot of issues there. As we think about extreme heat. We're concerned with public health, we're concerned with worsening air quality, we're concerned with the productivity of folks who work outside, we're concerned with public safety. We're concerned with energy burdens and urban heat islands that can be exacerbated under conditions of extreme heat. We're concerned with issues like food insecurity, the pandemic made maybe one in four households in Kansas City, food insecure. And we have an interest in trying to make sure that everybody has enough to eat. And we believe that we can make a huge dent on that issue. By taking a progressive and collaborative approach to land stewardship and urban agriculture, which in turn, we crosswalk with our strategies around nature based solutions and green infrastructure that we think can really help us a lot as we wrestle with more extreme flood events, or more extreme rain events and flood risks that might be coming our way. The

adaptation work included a lot of work on innovation and finance, we're trying to stand up a regional energy efficiency investment fund to create new lending products to support energy efficiency retrofits and low income housing. And in all of the buildings, frankly, in our region. There's a lot of stuff that we're working on, that has come out of that plan and new partnerships, forming literally every day to help us be as efficient as we can, as inclusive as we can. And as impactful as we can.

D

Doug Parsons 1:18:22

Great. You'd mentioned infrastructure. And that's where we're going to pivot here. So we have this infrastructure Act that was passed by the federal government, how do you see that infrastructure act and all the funding available through it is going to help with your local adaptation efforts,

T

Tom Jacobs 1:18:35

always gonna be foundational, there's no doubt about it. We wrote our regional climate plan without any dedicated resources to support that work. And now we hope to attain very significant resources to begin implementing this plan. There's lots of opportunities to do that. The bipartisan infrastructure law is a little bit scary, though. There's so much resources out there. And I know on the federal side, and on the local government or regional planning side, like I'm worth, like, where I live, there's just a stunning lack of capacity to either push the money out or apply for it and handle it. And so we're building stronger partnerships and new collaborations every day. So we can try and secure some of these new resources and use them as effectively as possible. I've heard that maybe there's up north of 150 different programs running through a dozen different federal agencies, and the bipartisan infrastructure law. So there's a lot of different things to look at. On our side of the fence. We've been looking really heavily at some of the resources that EPA and the Department of Transportation in particular, we expect there'll be other resources that will be of real interest to us flowing through the Department of Energy and some of the other agencies as well and so we're looking at them all carefully and trying to crosswalk this resources with strategies and priorities we identified in our plan and are using that as a or blueprint to figure out how we move forward. So you

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Doug Parsons 1:20:02

brought up a very important point that I'm trying to get across with this podcast that even though there's this money out there, it's actually quite complex to apply for money with the federal government. And so do you feel that you are able to even target specifically the programs that are gonna be available for climate adaptation and resilience? Are you there yet? Are you still having this conversation? So you're working with partners that can help you do that?

T

Tom Jacobs 1:20:23

My organization marker, the Mid America Regional Council is extremely experienced as managing large federal grants, we run very substantial transportation programs, we run the Headstart program in our metro area. So we're well versed in how to apply for and manage

restarted program in our metro area. So we're well-versed in how to apply for and manage federal grants. These are a lot of new programs and a lot of new resources. For us to be able to handle it well, we will also have to increase our capacity. One of the things that's most interesting to me is that the administration's emphasis on justice 40, right, ensuring that 40% of the resources at least benefit the most vulnerable populations across America, many of the community-based organizations that serve communities, in these more vulnerable populations don't have a chance at applying for managing a federal grant. It's much too complicated. So a lot of our work is focused on building partnerships where we can work together and some measures try to funnel resources to those communities who are most in need, while at the same time trying to do so in a manner that aligns with our regional policy and planning objectives.

D

Doug Parsons 1:21:31

Alright, I was gonna ask you that. So there's much smaller groups that could benefit from this. And so you're an organization that has that experience, you could partner with those groups. But a lot of times those groups don't even know that these resources are available. Do you guys do outreach to those groups? Are there other groups that are doing outreach? How did they even figure out that they can work with you on this?

T

Tom Jacobs 1:21:49

So tremendous question. And the answer isn't really very simple. I'd say that I and many of my colleagues are part of all kinds of networks that stretch across our metropolitan region. So for example, the University of Missouri, Kansas City has a center for neighborhoods that provides technical assistance and capacity building for more than 400 neighborhood organizations just in Kansas City, Missouri, we've got a dense set of relationships, that through which we can communicate to folks and look for opportunities and alignment. There's lots of other organizations in the social service space in the educational space, and health and environment, where there's lots of different relationships that are on the ground. And so we talk to a lot of people and try and figure out how do we connect and explore opportunities to work together.

D

Doug Parsons 1:22:41

So I had Braden K, from Tempe, Arizona on earlier in this episode, and one of the questions that I asked them that, let's say five years from now, seven years from now that you've applied for funding, you're successful in getting it. And you've got on the ground adaptation projects, and you're talking to a citizen in your region, and they're asking you okay, what were some of these adaptation projects that we funded? I know you can't necessarily say here specifically, but to help them understand what ultimately this is going to go for instead of planning and such as like on the ground? How do you explain to them what has happened?

T

Tom Jacobs 1:23:14

Oh, my gosh, there's so many different examples I could give you give me a few. Absolutely. We have a watershed in Kansas City called The Blue River watershed. It's about 240 square miles and a million of our 2 million people in this metro area live in that watershed. It goes from

low density suburban communities to the lower part of the valley, brownfield and industrial properties with a lot of parkland in between and the watershed is highly degraded, and yet it's also beautiful, and it's an undervalued resource that has experienced a lot of flooding over time. We believe that we can restore this watershed, reduce flood risks, improve water quality, improve biodiversity, reduce urban heat islands create new recreational opportunities, alternative transportation infrastructure, in ways that are elegant and beautiful and ecologically healthy. And at the same time, have the infrastructure and restoration efforts sequester a whole lot of carbon along the way. So that's one example. Another example is we are standing up a regional Building Energy Exchange, an organization that's modeled after similar groups in New York City in Washington, DC. We're trying to solidify our strength in the ecosystem of actors involved in delivering energy efficiency to residents and businesses and agencies and institutions across our metro area. We're thinking about how do we support contractors or architects or engineers or lenders or appraisers are realtors and think about all the folks involved in trying to make more energy efficiency happen once as we build that and as we create new financial tools to support more investment in energy efficiency projects, I think we're going to see very significant gains in energy efficiency and energy conservation across our region. And that will translate into healthier homes a healthier population, reduced energy burdens, some very substantial cost savings that can be reinvested into other community priorities, while at the same time we reduce greenhouse gas emissions to a very substantial degree. That's a second example. That's good.

D

Doug Parsons 1:25:34

All right. So you're at the stage now, where you're doing this planning and looking for applying for funding. And even when you project it out, when you're actually getting projects on the ground. How does it work there? When you're communicating the issue of climate change? Do you feel like the public's receptive Do you even feel that needs to be a component of what you're doing? Sometimes people apply for these adaptation funds. And they don't even mention climate change is part of the reason why they're doing it. How does that work in your region?

T

Tom Jacobs 1:25:58

Well, our board of directors, which is made up 33, elected officials from across our metro area, adopted our Regional Climate Action Plan. So we no longer have a problem, my organization's level in terms of using that terminology. But as we move across our region, there are different perceptions and thoughts or views about climate change. And sometimes we shift the frame through which we talk about these issues. Sometimes we talk about cost savings. Sometimes we talk about public health, sometimes we talk about quality of life. And to me, it doesn't matter doesn't matter if we're talking about climate, or we're talking about saving money by making our buildings more efficient. Because at the end of the day, it gets us where we need to go.

D

Doug Parsons 1:26:41

Excellent. If people want to learn more about what you're doing there in your region, what would you recommend that they do?

T Tom Jacobs 1:26:46

So if folks want to learn more information about what we're doing, we've posted our entire Regional Climate Action Plan at KC Metro climate.plan.org. It's all one word KC Metro climate.plan.org. And we've tried to break it up into chunks that are manageable. And so folks can find the parts of the plan that are of most interest to them. My organization's website MDRC dot O R G, has a wealth of information about our transportation planning programs, or environmental work, all of which of course, intersect with the climate plan, but those programs are laid out separately on the mark.org website. So those would be two places I could send you.

D Doug Parsons 1:27:26

Okay, fantastic. Tom, thanks for taking the time to come on the podcast. And thank you for what you're doing out there. Good luck, and a lot of hard work ahead of you. But thanks for coming on.

T Tom Jacobs 1:27:34

Thank you for inviting me. It's been a pleasure.

D Doug Parsons 1:27:39

Hey, doctors, I hope you've enjoyed these conversations. I've learned a ton about the infrastructure act. And as a bonus conversation, I recruited Chad Nelson from infrastructure Canada to come on and talk briefly about how they do adaptation and infrastructure planning on our northern border. Hope you enjoy hearing an international perspective on these issues. Hey, adapters joining me is Chad Nelson. Chad is a Principal Advisor for climate adaptation resilience for the federal department, infrastructure Canada, a role he's held since 2016. If it wasn't obvious from that title, Chad works for the Canadian government. Hi, Chad. Welcome to the podcast.

C Chad Nelson 1:28:11

Hello, Doug. Thanks for having me.

D Doug Parsons 1:28:13

Having someone from our northern neighbor, I'm very excited to have you on it's going to be talking about the infrastructure bill that we've done here in the United States. But I wanted to bring you on and talk about what you guys are doing up in Canada. But let's just first get people granted your federal agency. But what is infrastructure? Canada, it seems obvious, but give us a little bit more detail.

C Chad Nelson 1:28:29

Sure thing. We're a federal department with the mandate inside the federal government to support the investments in public infrastructure across the country. Often that involves say in funding, whether it's waste or energy or transport, buildings related infrastructure cost sharing investments with provinces and territories and municipalities as well. And indigenous communities too.

D Doug Parsons 1:28:52

I just mentioned your title there, you're doing adaptation, resilience, but he tells a bit more about what you do for the agency.

C Chad Nelson 1:28:58

Sure thing Well, in the Policy Branch, we're really responsible for making the proposals to our federal cabinet to seek the new funding programs, their renewal or creation of new ones to achieve different outcomes, public investment priorities. And so within our team, our role is really to advance climate related and environmental quality related outcomes. So that includes natural infrastructure aspects as well.

D Doug Parsons 1:29:22

I don't know how much you follow the US system like our federal D O T, but maybe you could ground us because you know, there's federalism in the united states and the states have a lot of power and they have a lot of responsibilities. But the federal DoD is still they're funneling funding to help build highways. And of course, they set some standards, but how does it work in Canada? How does that whole system work, I guess, in compared to what we're doing here.

C Chad Nelson 1:29:45

Well, in Canada, I mean, the primary owners of public infrastructure really our municipalities, provinces and territories by a vast margin, probably over 90% of infrastructure, but federally, we have the opportunity to really drive certain parts I'll see priorities for the nation in terms of offering cost shared funding, which can be really helpful when we're looking to match funds and whether it's to advance public transit, or certain social outcomes, or green slash environmental outcomes. And that's what we've been doing under the investment in Canada infrastructure program. Since 2018. or so, where we established about \$33 billion in funding for a green stream of funding that was leverage provincial and territorial and is for other investments towards public infrastructure facilities. So that wastewater drinking water treatment facilities, public transit, a really a wide array of public infrastructure. But I think what was interesting is that we applied a climate lens as a funding requirement for the first time to my knowledge federally in Canada in 2018, that looked at both the reduction of greenhouse gas emissions, but also climate resilience. So for any project that came to us with total eligible costs are 10 million, we wanted them to pass a climate test that would help us to know that we were actively fostering decision making that would advance climate outcomes.

D

Doug Parsons 1:31:05

So you jumped the gun, and one of my questions I have down but we'll just go ahead and get into this climate funds. I think this is very interesting. And so you describe what it is there. Have the groups that are applying for funding, or just people at the local level? Have they had trouble going through this climate lens process? What's that? Like?

C

Chad Nelson 1:31:22

I think it's always tricky when we're working in the world of climate resilience adaptation, because it's, you know, it's a domain inherently filled with uncertainty, and new and emergent understandings about what are the climate hazards? And what are their risk reduction measures, and then uncovering new ways really, of reducing those risks through users, such as natural infrastructure. So it'd be fair to say, in Canada with a wide array of communities, the over 3700 municipalities, that there certainly is a need to enhance the capacity of communities to think long term, and in an integrated fashion about really the emergent understandings of climate hazards. And so that's been a real effort for our department to see how we can support communities better whether it's our funding for things like the Federation of Canadian municipalities, and some climate targeted programs that would support municipalities to make these climate smart decisions regarding their long lived climate with along with assets. But it's also really a feature of new funding. We've just announced, they will talk a little bit later, but our national adaptation strategy, but there is an effort now we just have received an announcement of 97 million for online toolkits, so open access climate toolkits to support communities in making those decisions, as well as 59 million to advance the standards and codes and guidance that's so essential to help inform climate smart decisions.

D

Doug Parsons 1:32:49

So you'd mentioned earlier this national adaptation strategy. And so this was actually just recently announced. And I think the US is one of the last holdouts internationally on actually having a national strategy, although there is legislation to create one of it but that hasn't passed generally describe what this adaptation strategy is, is there funding involved with it?

C

Chad Nelson 1:33:08

Yes, there is funding involved with it yet wasn't announced in November 24 2022. So just recently, and it's looked at five main areas of action, whereas the country we need to know, essentially, who's who in the zoo, who's doing what and what are the roles, responsibilities of different actors across the country and seen a role to support whole society action, those five themes that were looked at beyond economy, workers, nation, biodiversity, health, and well being two in particular that touched on infrastructure. One was disaster resilience, and another one related directly to resilient infrastructure built in natural for that we brought together experts from across the country to give advice on what would constitute really effective and valuable goals, objectives and targets. So those are now laid out. There's a 90 day consultation period on those but a few of them particularly really speak to where Canada's seeking to go as

we pull together as a country to really tackle the challenge of climate adaptation, as I thought I'd mentioned maybe if they could, that some of the goals that are most relevant there's there's three of them, I think, that are useful. Here to cite one is about technical standards will have been updated or developed to that climate change in all decisions to locate plan, design, manage, adapt, operate and maintain infrastructure systems. And other one it says that infrastructure decisions will prioritize benefits from marginalized populations and communities at highest risk of climate change impacts. And the last thing to mention here too, is that all new investments in infrastructure will apply resilience criteria, and adopt climate change guidance standards and future design data to really maximize the long term benefits of infrastructure outcomes, specifically with there is a target in there that says starting in 2020, for resilience to climate change impacts is factored into all new federal infrastructure funding programs. So that's a preoccupation for my team as we look to put magnetically seek to deliver against these really important goals and objectives for our country. There was funding announced in this I would mention partly it was an additional 489 million for our disaster mitigation and adaptation fund. This was a signature or a flagship federal fund announced in 2018, with 2 billion at that time to 2021, there's an additional 1.4 billion added to it. So there's a little bit more added a little under half a billion just announced again a couple weeks ago. But we also announced these open access climate toolkits and the need over the next five years to put these in place for us to help with that capacity building really across the country. And I'll switch it really exciting, expand the efforts to develop guidance standards and codes for climate resilience, as well as low carbon infrastructure. Really, this is pretty foundational the establishment of resilience requirements across our funding programs. That's what we started to do with the climate lens when we developed that, but I think what we're great parallel to this work is really where I think Canada's leading I understand how she made states might be looking to build on what we've done is we've been able to prepare future climate design values, to look ahead 30 years and say, across the country, for over 600 sites, what will be the changes to so the precipitation and heat his design values that are actually in the terms that engineers use to build public assets. So in heating degree days, they're actually the appendix of those kinds of weather climate related values. It's found in our national model codes, we've identified future climate design data and put that online publicly, thanks to help the Pacific climate impacts Consortium, and our fellow federal department, environmental Climate Change Canada, to be publicly available truly to be building for the future ahead. Instead of as you hear some people in the adaptation fields, sort of say we're driving forward looking in the rearview mirror, when we look at old specs that are outdated, and how we should be building things. So that's been an exciting area,

 **D** Doug Parsons 1:37:00

I hope the US if you guys have great ideas, that we're not afraid to steal those great ideas, because we have a lot to learn. All right. I know you can't get into too much detail here. But this is an area that's important to me. And I think you're you're the co chair of this infrastructure and buildings working group. And I think you guys have, there's a report that came out of it, it just generally say what that is. But I think part of the mandate of this group or mandate is too strong a word, but communication is part of what you're doing there. And I think a lot of what you're doing, obviously is critically important, but sometimes it doesn't get out to the public is that part of your responsibility is in this working group to really explain what you guys are trying to do here?

C Chad Nelson 1:37:36

Very much. What I'm really pleased about that group is that it's underneath our national adaptation platform. And it's an open group in which we've been exchanging leading practices on how to address the challenge of climate change impacts for buildings and infrastructure. And so we've been bringing in speakers every two months or so whether they've come from indigenous communities. So when you think about Litton BC, that suffered 49 degrees Celsius temperatures a couple of years ago, and we had tremendous floods in British Columbia and 2021. But we feature people from across the country where they have lean practices in Toronto, how are they dealing with stormwater? And so this is really hoping that we can exchange that knowledge. So we can help, again, kind of level up the capacity understanding across the country. And so it's really great to have people keen to advance their understandings. Because, you know, I think fundamentally, there's some interesting things about climate resilience and infrastructure work. And it really is about avoiding what we can't manage and managing what we cannot avoid. But it's also about this idea of added value chain, where we moved from having the data and the information needed to make decisions. How do we identify those best practices, turn those into standards and codes, then help that build the capacity of communities to deal with the changes that upon us in an empowering fashion that also thinks about equity. And fourthly turn that capacity into the capital investments. And so the funding decisions and funding requirements needed to address a wide range of hazards and a wide range of assets. In Canada we have wildfire flooding, extreme heat, drought, permafrost thaw, flooding, and all the types of flooding coastal riverine, urban and sea level rise. So many of these are hazards that are common in the US and Canada. And same with the range of assets that we need to be looking at how do we protect our communities best to withstand the stand the asset can withstand itself, the changes presented by climate change, but also to protect communities. So I often think of with standard protect as a great way to think about resilient infrastructure. We need the the athletes themselves to engineer and we also need the communities to be protected. So it's an exciting time in which we're applying things like a national engineering protocol called pi v. See, it's an unusual name, but was funded by the federal government and engineers Canada to say, here's a methodical approach to go through thinking, location, design, build, and operation and maintenance decisions. We really need to think in a kind of an integrated fashion and have this more rapid learning in this emergent domain.

D Doug Parsons 1:40:18

All right, last question. If people out there listening to this right now, you guys are doing some amazing work up there. If they really want some people that actually want to do some applied work, and maybe even incorporate some of these things that you're doing. Where would you tell them to go? What are some good places to start? And I'll have links in my show notes. But what would you recommend?

C Chad Nelson 1:40:35

Sure, the Canadian Center for Climate services, it has an online presence, it's led out of environment, Climate Change Canada, but they can also look at the infrastructure Canada or infrastructure.gc.ca website, where they'll find links to the information that I've talked about, certainly, to the some of the standards and codes and guidelines for climate resilient infrastructure that we've been putting forward along with our programs that are green and

inclusive community buildings, \$1.5 billion program, and the climate lens information. I really think that this is this International Institute for Sustainable Development, a report that we commissioned in 2021 was a useful typology of looking across climate hazards, how they affect different assets and the types of solutions that are available with a focus on nature based or natural infrastructure solutions. So that's another one that can be found simply by googling iisd and advancing climate resilience or Canadian infrastructure.

D

Doug Parsons 1:41:30

All right, Chad, this has been fantastic. I appreciate you being part of this. This focus is on the US and the infrastructure work that's going on here. But I wanted to bring you in and talk about what's going on in Canada. Obviously, a lot of great work. And thanks for all the work that you're doing.

C

Chad Nelson 1:41:43

It's really been a pleasure. And I'm really pleased that your podcast is serving a really vital need to exchange leading edge knowledge on how we can all make a difference and turn this into an empowering discussion when there's there's a lot of difficult things in the world. And I think that the climate resilience is a domain in which people can have a sense of agency in a world of uncertainty.

D

Doug Parsons 1:42:06

Okay, adaptors that is a wrap. Thanks to everyone for participating in this episode, there are a ton of links in my show notes. If you want to follow up on the resources that my guests shared, the infrastructure act truly does represent a once in a generation opportunity to do some serious adaptation work. So much of the adaptation space has been focused on the planning side, which of course is critical, but rarely are there the resources to act on that planning? Well, now there is that is if it's done effectively, and collaboratively. If you are looking to tap into these funds and don't know where to start, I highly recommend you reach out to Shalini. There's still time, but you definitely need to get started. I also hope that communication will be a big part of these projects. All too often communication is barely an add on to any of these project grants. Again, this is a once in a generation opportunity to communicate to the American public the issue of climate change and what needs to be done to adapt to it. I hope communication groups see this opportunity to and partner with local governments in these efforts, communications will simply not be a priority for many local governments make it yours. Now more than ever, we need a national adaptation action plan and a national communication strategy. Let's do this. Okay, upcoming episodes, World Wildlife Fund returns to talk about their work with mangroves as a key tool in coastal climate adaptation. Dr. Eric Chu of UC Davis joins podcast to discuss urban planning and the somewhat convoluted approaches to climate equity and environmental justice efforts. Also on traveling to Trinidad and Tobago for the next keeping history above water conference, looking forward to sharing that story. Speaking of stories, what's your adaptation story to the people that you engage with? Understand what is climate adaptation? Are you finding that webinars and white papers really aren't resonating in ways that promote the work that you do? Well consider telling your story in a podcast. If you're interested in highlighting your adaptation story, consider sponsoring a whole episode of

America daps. sponsoring a podcast allows you to focus on the work you're doing and sharing with climate professionals from around the world. Many times I go on location with the sponsor podcast, which allows you a wider diversity of guests to participate, you will work with me to identify these experts that represent the amazing work that you're doing. My partners have been as I mentioned before World Wildlife Fund NRDC, University of Pennsylvania, Wharton, Harvard, UCLA, and some corporate clients, it's a chance to share your story with all my listeners who represent the most influential people in the climate adaptation space. Most projects have communications written into them, consider budgeting in a podcast, podcasts are evergreen, they have a long shelf life, much more so than a white paper or a conference presentation. Many groups work into their communication strategies. And if you represent a whole conference, once people leave, that's it captured the work through a podcast. I've done that many times, and it's a chance for your conference to live on for many years after the event. There is no better platform than this podcast to get the word out on adaptation to some of the most influential and active adaptation professionals in the world. And if you're interested in having me speak at a public or corporate event, reach out I do a lot of speaking and I really enjoy it. I give keynote presentations they are a lot of fun. I share stories from the podcast and my own experiences doing adaptation. Definitely check it out at America.daps.org Okay, guys, as we wrap this up, you know, I love hearing from you. Just take the time, email me, it's how I learned what you guys do how you're in the space I've learned since I started doing this podcast, you guys are doing some of the coolest work around the world. So take just a little bit of time reach out say hi, maybe there's a particular episode you enjoyed or maybe there's areas that you want me to cover more. I'm at America.daps@gmail.com Send me an email. Okay, adapters Keep up the great work. I'll see you next time.